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The imposition of a tax of 5 per cent. on the dividends of gold-mining companies in the Transvaal will weigh chiefly on the more prosperous and successful companies, of course; but it is calling out plenty of protests, especially as it is not accompanied by any offset in the way of tariff reductions or removal of the monopolies which now burden the mining industry. By itself the tax is not a heavy one, but it is unwelcome as an indication that the Transvaal Government is still disposed to draw all its revenue from the industries which are chiefly under foreign control. Every movement of this kind tends to widen the breach between the Government and the "uitlanders," and to make the condition of affairs more serious.

It is announced from Ottawa that the Canadian Government is arranging to dispose of the reserved mining rights on the rivers in the Yukon District at public sale. The rights are to be divided in sections, with an outside limit of 5 miles in length on any stream. The taker will be required to spend at least $5,000 a year in development and other work on each section, and to pay $150 a mile yearly rent, besides 10 per cent. on all gold taken out over $25,000. Preference is to be given to miners who have already located claims in the region. The official announcements will shortly be made. It is understood that the leases will contain strict provisions for forfeiture in case of failure to work, so that claims cannot be held for speculative purposes.

Another instance of appreciation of our advantages in the manufacture of iron and steel is found in the announcement that negotiations are pending for the sale of a large interest in the Newport News Ship-building and Dry Dock Company's property, at Newport News, in Virginia, to the Vickers' Sons & Maxim Company; and that that company proposes to establish a large plant for the construction of guns in connection with the ship-yards. The English concern is one of the heaviest in existence whose business is the manufacture of ordnance; its only rivals in that line being the Armstrong Company, at Elswick, in England, and the Krupp Works, in Germany. Doubtless the Vickers Company expects to find its advantage in the cheapness and abundance of raw material to be had here, as well as its excellent quality. The supply of fuel is also a probable consideration of some importance.

In January, 1894, the "Engineering and Mining Journal" published a statement giving the cost of making a ton of pig iron at an Alabama furnace at $6.37, the items including $3.87 for materials, $1.25 for labor and $1.25 for other expenses. Our figures caused a great deal of comment and in some quarters much doubt was expressed as to their correctness, though none of the doubters offered to give actual figures in their place. We now have statements from advanced proofs of Dr. William B. Phillips' "Iron Making in Alabama," which show from actual returns how close an approximation to the truth the figures referred to presented. This report gives the average cost of producing pig iron in Alabama for three years as below, these amounts being supplemented by the highest and lowest costs reported by any of the furnaces:

	1894.	1895.	1896.
Average cost	$6.46	$6.65	$6.47
Highest cost	7.81	7.02	6.84
Lowest cost	5.71	5.84	5.74

A noteworthy feature of this statement is the reduction in the highest cost reported, while there was but little variation in the lowest. We may add that the report shows a reduction in the cost of materials, but an increase in that of labor. The ore, limestone and coke were 74.4 per cent. of the total cost in 1894, and 70.9 per cent. in 1896; while the proportion absorbed by labor rose from 12.9 to 15.0 per cent.

There has been some discussion as to the cost of American roofing slate, delivered in England, as compared with that of Welsh slates from the quarry. We have obtained from the most authentic sources the various items which go to make up the cost of delivering slate from the Pennsylvania quarries to the British consumer, and are thus enabled to make an exact comparison. American slate is sold, as our readers know, by the square—which is 100 square feet as laid on the roof; but as many of the transit charges are by the ton, we have reduced the unit to a long ton. As a square will vary little from 650 pounds, this gives about 3½ squares to the ton. The price of the quality of slate exported is about $3 per square at quarry; but sales for export have been made at lower rates—we are informed as low as $2.25 a square. An average would probably be not far from $2.50. On this basis we find the cost in London as below:

	U. S.	Sterling.
Slate at quarry, per long ton (2,240 lbs.)	$8.75	36s. 6d.
Freight to New York	2.75	11s. 5d.
Ocean freight	3.00	12s. 6d.
Unloading, storing, etc.	1.44	6s. 0d.
Total	$15.94	66s. 5d.

The present price of Penrhyn second quality 20 by 10 inch roofing slate at the shipping point in Wales is 142 shillings a thousand. As a

thousand would be equivalent to about seven squares of American slate, the Welsh roofing at the quarry would cost 9 shillings more per thousand, than an equivalent quantity of American in London. We have said nothing about the freight on the English railroads, as to all points except in a small district the rates from London would be nearly the same as from the Welsh quarry. It appears, therefore, that at present rates the American slate has slightly the advantage. The variable element, of course, is in the ocean freights, which may cancel the present advantage at any time, or may increase it.

The position of the Sulphide Corporation, Limited (Ashcroft process), is just now attracting attention in London. The article on that process in the "Engineering and Mining Journal," October 22d last, caused, we are informed, a good deal of talk in London, so that when the internal quarrels of the directors of the corporation began to be public property recently they caused more interest than would otherwise have been the case. It will be remembered that the company was floated by the Exploration Company and no prospectus was issued. The Australian branch of the Gibbs firm assisted in the promotion, but acted entirely in unison with the Exploration Company. The experts whose reports were used in flotation were Mr. Fletcher Moulton, who advised on the validity of the patents, and Mr. James Swinburne, who advised on the technical part of the process. But Mr. Moulton only advised as a lawyer in the case as drawn up by his clients and not from his personal search or knowledge of the subject; and Mr. Swinburne, though an able electrician and chemist, is not a practical metallurgist. So the judgment of these two gentlemen was not really sufficient, though it was considered so by the Exploration Company. So much for the history of the company. During the last few months there have been internal dissensions in the board; the Gibbs group have alienated themselves from the Exploration Company, and being in a majority, have taken the company out of the offices of the Exploration Company. The latter is now in a minority, and its representatives have refused to sign the report of the directors. The general meeting is to be held soon, and most strenuous efforts are being made on both sides to get votes. The three directors representing the Exploration Company pose as champions of all the virtues and accuse the other group of extravagance and improper management, but after thinking over the history of the company as given above, the old proverb of the pot and the kettle calling each other names is suggested. It seems probable in London that the Exploration Company will be outvoted when the polling takes place.

"CARBOLITE"; AN ALLEGED NEW CARBIDE.

There have been lately in the technical press numerous accounts of a process invented by Herman L. Hartenstein for the production of "carbolite" as a by-product in iron smelting, this being, it is claimed, a cheap substitute for calcium carbide, and of the same nature as the latter. According to the inventor the profit in producing it from molten blast furnace slag promises to be so great that the pig-iron itself may come to be regarded as a by-product.

This new substance "carbolite" is described in the patents as calcium-aluminum-silicon-carbide, represented by the formula $Al_4 C_3$, SiC, CaC_2. According to an account furnished us by the inventor it is manufactured by taking blast furnace slag direct from the furnace, placing it in converters similar to those used in steel making, impregnating the molten mass with pulverized coke by means of a gas-blast, and then turning the converters on their trunnions so that the mixture is brought in contact with carbon bars through which a powerful current of electricity is passed, generating the intense heat required to produce the carbides. A very alluring estimate of the cost of production and the wide field of usefulness that it would have is presented in the paper with which we have been favored. Owing to the attractiveness of these statements and the widespread currency which has been given to them by the press we deem it our duty to point out wherein they are misleading.

It should be borne in mind that such slag as Mr. Hartenstein proposes to use contains at the most only 50 per cent. of lime, and it may be easily appreciated that a carbide thus made would be a very poor substitute for pure calcium carbide in the evolution of acetylene. The silica in such slag would combine with the carbon through the agencies of the powerful electric current to form silicon carbide, or carborundum, which gives off no gas on the addition of water. The alumina under the same conditions would form aluminum carbide, which on addition of water evolves methane, CH_4, which is only faintly luminous, it being the same in substance as natural gas. The iron oxide in the slag would be reduced to iron carbide and would thereby add still more impurity to the "carbolite." From this it follows that the "carbolite" would be so mixed with non-gas-making impurities that it would generate only a small amount of illuminating gas as compared with pure calcium carbide.

It should also be borne in mind that the production of these useless impurities (aluminum, silicon, and iron carbides) costs electrical energy, and although some economy would be secured by beginning with an already heated product, it is doubtful if this would offset the waste of electrical power. These criticisms are purely from a technical standpoint, but the process is also open to serious criticism on legal grounds, since it is highly doubtful if carbolite can be made without infringing on one or more existing patents. This phase of the question is too complicated for us to take it under discussion here, further than to say that even if carbolite were a valuable product, its makers would have a lawsuit on their hands as soon as they put it on the market. The Hartenstein patents consequently are of a kind that ought to be shunned by investors, although we understand that considerable money has already been laid out for their exploitation.

FIRES AND MILL CONSTRUCTION.

The recent destruction of the old Franklin Mill, in Michigan, and the burning, not long ago, of the Standard Consolidated Mill, at Bodie, Cal., are only two among constantly recurring incidents of this kind; but they serve to call attention again to the question of mill construction, the discussion of which is always in order.

In almost all of our mining districts wood is the material most easily and cheaply obtained, and consequently that most generally used. Wooden mill buildings are the rule and other constructions the exception. In the average mill and with the average workman there is always more or less carelessness and the breaking out of a fire is only a question of time. In most cases it will start in some unexpected and unwatched corner, and in an old mill it is usually impossible to stop the fire. In a very short time it will be beyond control by the means at hand, and there is almost always combustible material enough scattered about to make total destruction certain. In nine cases out of ten the structure itself is the best food for the fire at hand, and it disappears in short order, with heavy damage to the machinery it contains. More care may be exercised in some mills than in others; but it is practically impossible to watch every corner, where oily waste or some other fire-starter may be stowed away, without an expense for watching and supervision which would be entirely out of the question. Elaborate apparatus for putting out a fire is also usually costly, even where there is plenty of water; and such apparatus is very apt to be out of order when it is wanted.

It is certainly worth the while of a company about to build a mill to consider this question carefully. A comparatively small addition to the first cost of construction will generally provide buildings in which the danger from fire can be reduced to a minimum, and may in the end result in a great saving; avoiding not only the destruction of valuable machinery, but also the delay and loss which result from interrupted operations.

The ideal mill building is, of course, that with stone or brick walls, iron beams and roofing, and the substitution of iron for wood wherever possible, and careful sheathing of such wood as may be required. Of course, such a building is impossible in many places, and is very rarely to be found. Perhaps the best examples are at some of the Michigan copper mines, though there are plenty of an inferior class to be found at some of those mines. Where work is conducted on a large scale and a mine has presumably a long life before it, such buildings will pay, as good work always does in the end.

In many places where such construction is out of the question, or where the extent of the operations will not warrant the expenditure, there is room for great improvement over the common practice. Iron and steel are much cheaper now than formerly, and there are very many cases where they can be substituted for wood at a moderate increase in first cost. This is the case in almost all places where railroad transportation can be had; and structural steel can be carried wherever heavy machinery can go.

Even where transportation would be costly it might be possible to use iron sheathing and roofing with a wooden frame, thus reducing the risk from fire materially, at a moderate expense. Other variations in construction may suggest themselves as suited to special locations; the principle of avoiding the use of combustible material wherever possible being kept always in view.

Another point which ought to be considered is that in building it is well to avoid too much concentration. As far as possible separate buildings shoulds be used, so that in case a fire does start it may be confined to a portion of the works only. Convenience and economy in working may require the placing of a large part of the machinery under one roof; but at least the boiler and engine rooms and the other parts of the works where fire is necessary should be in separate buildings. Where it is necessary to warm the buildings, the heating apparatus requires careful planning and supervision.

It may seem that such work as we have suggested will be too expensive; but we do not believe that the extra cost involved need be so great that it will not be balanced by the advantages. There is a great deal more to be said on the subject than we have space for here, but we hope to refer to it again; and we believe that the suggestions outlined are worth consideration.

NEW PUBLICATIONS.

"The Metric System of Weights and Measures." Prepared by J. M. Alen and A. D. Risteen. Hartford, Conn.; The Hartford Steam Boiler Insurance Company. Pages, 196; with diagrams and tables. Prices, $1.25 and $1.50, according to binding.

In the review of this convenient little book in the "Engineering and Mining Journal" of November 12th (page 573), a misprint gave the price at $1. The correct prices are $1.25 for the cheaper edition and $1.50 for the better, the difference being in the style of binding, etc. We trust that our readers who may wish to obtain the book will bear this correction in mind.

"Les Terres Rares: Mineralogie—Properties—Analyse." By P. Truchot. Paris, France: George Curre & C. Naud. Pages, 315; illustrated. Price (in New York), $1.75.

This book is a detailed summary of the present chemical knowledge of the elements of the cerium and thorium groups, together with a few others, including glucinum and germanium. It is divided into three parts. The first treats of the minerals in which these elements occur. The second is devoted to a description of their properties. The third treats of the analytical methods for use in their determination. So far as it goes the treatise appears to be full and explicit. Indeed, we know of no other place where the chemical knowledge concerning these elements is presented with so much detail. The author is open to criticism, however, through including as elements some like phillippium, decipium, etc., whose elementary character has not yet been conclusively determined.

"Portland Cement: Its Manufacture and Use." By Charles D. Jameson. New York, 1898; the D. Van Nostrand Company. Pages, 192; illustrated. Price, $1.50.

This monograph is the outgrowth of a course of lectures delivered to the engineering students of the State University of Iowa, and presents in a condensed form our present knowledge of the nature and properties of Portland cement, a very important subject in engineering. The general plan of the book can best be shown by a brief summary of its contents. Chapter I. is a general presentation of the subject, showing its importance and giving a brief account of the properties of lime and of cements of different kinds. Then follow in succession chapters on the history of the use and manufacture of cement; on the manufacture of Portland cement; and on testing. Chapter V. gives the specifications in use by engineers for Portland cements in the United States, Germany, France and Austria. Chapter VI. treats of the chemical processes concerned in the hardening of hydraulic cements; this chapter is contributed by Dr. L. Andrews, professor of chemistry in the Iowa University. Chapter VII. is devoted to cement testing machines and stone crushers, while Chapter VIII. describes the uses of Portland cement. The concluding chapter presents in condensed form the results of a series of comparative tests of different cements conducted at the Iowa University. These tests extended over a period of several years, and are of much interest and value.

Every engineer who has been employed on construction work recognizes the great importance of cement and the necessity of adding to our knowledge of its properties and strength. In too many cases it is the uncertain element in construction, because those who use it do not realize the necessity of closely specifying and watching the manufacture and quality. Even if properly made from good materials the value of the cement may be seriously depreciated by improper handling and application. This makes it important that engineers should understand how cement ought to be made and how it should be used.

The value of Prof. Jameson's book from this point of view can readily be seen. It sums up and puts in convenient form the results of experience and the most approved practice in making and using cement. It is an acceptable and useful addition to engineering literature.

BOOKS RECEIVED.

In sending books for notice, will publishers, for their own sake and for that of book buyers, give the retail price? These notices do not supercede review on another page of the Journal.

"Les Accidents Survenus dans les Puits de Belgique pendant les Annees 1896 et 1897." Par Victor Watteyne. Bruxelles; Polleunis & Ceuterick. Pages, 188; illustrated.

"Emploi des Explosifs dans les Mines de Houille de Belgique pendant l'Annee 1897." Par Victor Watteyne and Lucien Denoel. Bruxellos; Polleunis and Ceuterick. Pages, 88.

"Petrographical and Geological Investigations of Certain Transvaal Norites, Gabbros, Pyroxenites and Other South African Rocks." By J. A. L. Henderson. London, England; Dulan & Co. Pages, 56; with 5 plates.

"Commercial Cuba: A Book for Business Men." By William J. Clark. With an introduction by E. Sherman Gould. New York; Charles Scribner's Sons. Pages, 516; with maps and illustrations. Price, $4.

CORRESPONDENCE.

We invite correspondence upon matters of interest to the industries of mining and metallurgy. Communications should invariably be accompanied with the name and address of the writer. Initials only will be published when so requested.

Letters should be addressed to the MANAGING EDITOR.

We do not hold ourselves responsible for the opinions expressed by correspondents.

Good Electric Mine Signals.

Sir: In your issue of November 26th I notice an abstract of an article on "Electric Mine Signals," by Mr. Clements. A brief description of the electric bell system which we have been using for the past 10 months on this mine may prove of interest, it being the first of the kind in operation. It has been in constant use since it was installed, to the entire exclusion of the old cumbersome bell rope and its extreme simplicity, absolute accuracy in signalling, no cost for repairs, comparatively small cost for installation, and the fact that signals can be rung from the cage when in motion nearly as well as from the stations, are among the many advantages of the system.

The wires are conducted down the shaft, which is 500 ft. in depth, one on each side of the guide next to the pump shaft, and far enough apart to give ample clearance for the safety cams on the cage. They are securely fastened on every third set (or 15 ft.) by means of hollow earthenware insulators, filled with lead, which hold in place a brass clip for the wire. A hole is bored in the dividing timber about 3 in. in depth, into which the insulator is driven. The wires, which are soft iron telegraph wire, No. 8 gauge, are securely fastened to strong insulators at the shaft top, and tightened from the bottom by means of long turn-buckles, and are connected to the electric light wires in the engine-room through a home-made step-down transformer of piano wire, which reduces the voltage from 110 to about 20. A double switch in the engine-room permits an instant change from the dynamo to a 40-cell (Samson) battery, in case of stoppage of the dynamo for oiling or repairs.

The signalling is done by means of circuit closers at each station, as well as from the one on the cage. The station circuit closers are very simple: a small rod of ⅝-in. round steel is run through a hole in the station post, which brings it just back of the guide and about 2 in. above the divider, where it is secured in two small solid journal boxes. An insulated handle is put on the end at the station, and two curved brass circuit closers are fastened on the rod in such a manner that a half turn brings them in contact with the wires, a counterbalance on the rod immediately returning them to their original position on releasing the handle. The circuit-closer on the cage is necessarily a little more complicated, and is rather difficult to describe, but the principle is the same. It is fastened to the corner braces of the cage and the outside of the shoes. The arms work on a ball point, insuring greater certainty of both points being brought in contact with the wires while the cage is in rapid motion. We tried it at first with rigid arms, and although it was at rest, it was not a success while in motion.

We have as auxiliaries in case of a break-down of this system a bell rope and flashlight signal from each station, the latter being used entirely to let the cage tender know at what level he is next wanted.

W. B. Wilson.

Elkton, Colo., Dec. 3, 1898.

The Boston & Carolina Mining Company.

Sir: We note on page 642 of your issue of November 26th your reply to an inquiry concerning the Boston & Carolina Copper Mining Company, as follows: "It owns a tract of land in Granville and Person counties, in North Carolina, in which there is said to be deposits of copper ore. The quantity of work done on the property so far has been very small, and there is no reliable information as to their extent or quality."

The undersigned firm have been subscribers to your able periodical for a considerable term of years. As such we would like to suggest that, had you seen fit to confer with us before stating there was "no reliable information," etc., we would have been pleased to offer you such data as would have made the editorial assertion above referred to impossible.

Upon two of the five mines owned by the Boston & Carolina Copper Mining Company—namely, the Blue Wing and Gillis Mines—there has been, and is being, prosecuted substantial development work. In the case of the Blue Wing we are shipping ore regularly, and the productive capacity of this mine, which is showing three grades of ore, No. 1 producing from 20 to 40 per cent. copper, No. 2 showing 15 to 18 per cent. and No. 3 running from 5 to 10 per cent., is regarded by mining and metallurgical experts as promising in an unusual degree. Shaft No. 2 in the Blue Wing is now down 160 ft. The vein is about 4½ ft. wide at the bottom of the shaft and shows increased richness as well as a clearly defined widening tendency as depth is attained. The 100-ft. level from shaft No. 2 has been driven about 158 ft., and at its extreme limit—having penetrated 10 or 15 ft. beyond a dyke formation—is now in the midst of a mineralized vein showing richness surpassing any of the No. 1 grade of ore which preceded the work of drifting on this level prior to encountering said dyke. In the opinion of our general manager, who is a Harvard mining engineer with several years of practical mining experience in the West, the Blue Wing property is very valuable, because, with the practically inexhaustible quantity of good grade ore in sight and indications more favorable as you go down, there is every reason to believe that it will continue better to an illimitable depth.

Our general manager is confirmed in his opinion by such eminent men as Mr. J. H. Susmann, mining engineer of the Canadian Pacific Railroad. In an exhaustive report made upon the Blue Wing Mine during the early part of 1898, Mr. Susmann agrees with previous reports

upon this property made by the late Dr. Emmons of New York City, former State Geologist of New York and North Carolina, and the present State Geologist, Mr. J. A. Holmes of North Carolina, so far as they refer to the general formation and strength of the belt, that the veins are true fissure with a dip of 70° to the east. Mr. Susmann summed up his report with the statement: "I feel justified in recommending the expenditure of capital to thoroughly develop the properties in question by sinking and drifting, and believe that if it be judiciously applied there is good promise of profit for the money invested."

There is another shaft in regular operation on the Blue Wing Mine which is now down to below 60 ft. and is showing an excellent quality of ore. The second drift at 160-ft. level in main shaft will be started this week, following a well-defined vein and opening up a solid ore body.

The undersigned official bankers and brokers for the proposition have no hesitation in predicting a solid, satisfactory future for the Blue Wing property, which is one of the five properties, as above stated, owned by this company.

The Gillis Mine, about which much was written and reported by mining engineers before the Civil War, has two shafts—one to a depth of 180 ft. and the other 90 ft. deep. Active development work will shortly be commenced in the Gillis Mine, where large ore bodies are already exposed ready for stoping and of a quality assuring handsome profit resulting from its production and reduction.

Quoting from the report made after an examination of the Gillis Mine, Dr. Emmons, above referred to, says: "The metal which the vein carries yields about 60 per cent. of copper. The vein carries, in addition to the vitreous copper, red and black oxides of copper in a continuous belt running across the shaft. The lode continues all the way down to the bottom of the shaft. The vein stone is porous quartz, stained and impregnated with the green carbonate of copper."

After the second examination of this mine Dr. Emmons said: "I now feel confident that it will prove better even than I was led to expect on my first examination. The indications which the rock furnish prove this to be a mineral district of considerable importance."

Charles T. Jackson, former assayer to the State of Massachusetts, made exhaustive and commendatory report upon the Gillis Mine, the original of which—an interesting document written by the author's hand and on file at the Boston office of the company, 46 Congress Street—show his deductions to be conspicuously confirmatory of all the opinions regarding this property expressed by a goodly number of eminent metallurgical and mining engineers who have examined it.

From the Blue Wing Mine three average samples of rock were taken by Mr. Susmann early in 1898 and assayed at the Massachusetts Institute of Technology, returning respectively 9.3 per cent. in copper, 39.52 in copper and 15.9 in copper. It was also found that the ore was remarkably free from arsenic and antimony, which makes it an excellent smelting ore. Silver is found to be a bi-product of appreciable importance in the Blue Wing ore.

A recent certificate from Ledoux & Company, of New York, gives the following results from samples taken by them from a carload of 43,821 lbs.; Moisture (after drying), 0.48 per cent.; copper by electrolytic assay, 16.43 per cent.; copper by American fire assay, 15.13 per cent.; silver, 5.40 oz. to the ton of 2,000 lbs.; gold, 0.01 oz. to the ton.

The location of these properties being close to the Atlantic seacoast, at a distance of about 157 miles from Norfolk, Va., together with cheaper labor (75 cents per day for miners) and the climate, unlike any other copper producing district of the country, which permits of mining ore every working day in the year, together with the low price of transportation, of supplies of all kinds, enables this company to produce copper at a minimum cost. Rich copper ore in large quantities is now being shipped, several carloads a week, from adjoining properties owned and operated by Boston mining engineers, and is obtained at a greater depth on the same mineral belt in these other properties.

Mr. Edward A. Bailey of Boston, who has several times accompanied the directors of this company to the mines, says in one of his communications to the directors, dated June 20th, 1898: "I consider the general indications here much superior to the run of Western copper properties upon which development work is being vigorously and successfully prosecuted. It is evident to those who have thoroughly investigated that this copper section in North Carolina is soon to be rated as one of immense value and great productive capacity."

The undersigned firm have witnessed the effect of personal inspection by not less than 50 conservative New England capitalists, who, at their own expense, have visited and investigated the properties. It would strike you, as it did us, as a significant fact that in every instance these gentlemen were thoroughly converted to the merits of the company's proposition and have become stockholders.

The company has pursued the policy of allowing every stockholder to look the matter up for himself, and as a result we have placed about all the stock we desire to sell for the purpose of development and erection of a local reduction plant in due time. We have a considerable sum of money in the treasury at the present time, and propose to prosecute a legitimate mining business.

We can name in addition to the eminent authorities above referred to an imposing list, if you desire, of referees and personal investigators, both among mining engineers and capable laymen. The personnel of the directory of the company is made up of representative men in their respective avocations.

We inclose a copy of our prospectus, and would be pleased to answer any questions which either you or any of your constituents wish to propound.

In closing we will state that we offered the stock of the above company for sale after a most thorough expert examination of the mines and a careful study of the favorable conditions for working same. We have no hesitation in stating that we believe every economic and commercial factor to be favorable to our operations, and therefore we feel warranted in believing the earnings of this company will enable the stock to rank on an equal footing with leading copper stocks in Boston. It has been our intention to place some of these facts before you at an earlier date, but, as intimated at the outset of this letter, we assumed that if inquiry should reach your office you would consult us, or some of the directors, for information before expressing an opinion.

Bickford & Richards.

Boston, Dec. 1, 1898.

MINERAL PRODUCTION OF ALABAMA.

The mineral production of Alabama for August, September and the nine months ending September 30th is shown in the following table. For the figures we are indebted to Dr. Eugene A. Smith, State Geologist:

	August.	September.	Nine Months.
Coal, short tons	527,607	539,380	4,700,218
Coke, " "	95,873	131,658	962,107
Iron ore, long tons	162,809	170,607	1,646,968
Limestone and dolomite, tons.	37,107	39,281	380,484
Bauxite, tons	1,562	1,409	9,148
Lime, barrels	7,270	9,033	87,397

About 90 per cent. of the production is reported directly, the balance being estimated on the basis of the returns last received by the State Geologist. The whole statement is therefore very close to the actual output.

The output of pig iron from the Alabama furnaces in September was 80,245 long tons. For the nine months it was 759,000 tons.

NEW IRON WORKS IN RUSSIA.—Increased activity is reported in the Kerch Peninsula, in the Black Sea, where blast furnaces have been erected and are now in operation. A new foundry, with six furnaces, is in the course of construction at Rostoff, on the River Don.

Metallurgical enterprises are being established in Northern Russia for the utilization of the iron ores of the Olonetsk region. While no great plants such as now exist in southern Russia can be established in this part of the Empire, the number of small plants now in course of construction will materially increase the total amount of iron produced in Russia.

THE SOCIETE JOHN COCKERILL.—The annual report of this great Belgian company, recently issued, shows the payment of 2,000,000 fr. in dividends last year, after deducting all charges for depreciation, improvements and other accounts. The report says that the cost of coal has increased by 10 per cent. The cost of producing pig-iron has been sensibly affected by the increased price of coke, the increased output of the Spanish iron mines, the Spanish-American war, and the new tax on exports of iron ore from Bilbao. The quantity of pig has been reduced, and the output of basic iron has been increased. With reference to the steel works, it is observed that the price of rails has been kept low by the competition of the United States. The steel works have produced much the same quantity as in the previous year, and the exports of rails have been about 50,000 tons. The other products of the steel works have generally been sold at a better price. The new basic steel works have been working satisfactorily. The foundry department has been, and is, extremely active, and work is assured for a long time ahead. The new wheel, forge and merchant mills have also done well, while the engineering works have had an exceptionally brilliant career, and orders are in hand that will keep them employed for a considerable period. The new gun factory only awaits the installation of some tools to be completely equipped. The boiler works have done better than in any previous year, and have completed in all 131 boilers, land, locomotive and marine, while the shipbuilding works have produced 33 vessels in all, and have repaired 16 others with good profits. The results achieved by this important company are therefore very satisfactory.

UTILIZING THE POWER OF THE NILE.—Prof. George Forbes, says London "Engineering," is reported to have said to an interviewer, in reference to his Nile power scheme, that power could very easily be generated at the First Cataract, where Assouan, one of the most important towns in Egypt, is situated, to supply electricity for pumping purposes for the irrigation of Egypt proper. This would certainly be the most important application of it at this juncture, but the power could also be introduced into the sugar factories and other works at Assouan and elsewhere, and also utilized for electric light, railways and tramways, which could be worked from there. With the facility of large pumping operations by means of electric power, it would be possible to reclaim vast areas of good soil which are at present above the reach of the existing irrigation canals. At the Second Cataract, which is situated just above Wady Halfa, power could be developed to any extent that is likely to be required. Its chief value here would be for working the two railways that have been built by the Sirdar—one following the course of the Nile toward Dongola, the other running across the desert to Abu Hamid, and thence, when completed, to Kartoum. But in order to work this last railway with the best economy, it would be necessary to make use of the Fifth and Sixth Cataracts in addition. These Professor Forbes had not examined, and consequently did not know what their capabilities were. Near the Third Cataract is a place called Kaiber. There a reef of granite runs across the river, and is entirely covered by the water when in flood, while in summer all the water flows through three channels in the reef. At this point a dam could easily be built, not only for impounding the water in a reservoir, but also for assisting the irrigation at low water in Egypt proper, and to work machinery for generating electric power. This would be applied partly to the working of the first railway referred to above and partly to pumping operations in the Dongola Province. This province appeared to Professor Forbes to be capable of being made one of the most fertile regions of the world. Professor Forbes has submitted this report to the Egyptian Government, and it remains to be seen what will be the outcome.

MINERALS AND MINING AT THE OMAHA EXPOSITION.

Written for The Engineering and Mining Journal by Marcus Benjamin.

At no exposition since the World's Fair, held in Chicago in 1893, has the mineral wealth of the United States been so satisfactorily shown as at the Exposition that, during the last six months, has attracted visitors from all parts of the Union to Omaha. Colorado, Utah, Arizona and New Mexico on the south, and the Dakotas, Montana and Washington on the north, exhibited their best for the purpose of showing their treasures to the world.

The building in which the exhibits were housed calls for a word of recognition. It was of the Greek Ionic style of architecture, and was designed by Mr. S. S. Beman, whose successful plans have given him high rank among Chicago architects. The extreme length of the building was 304 ft. and its width 140 ft., while the floor space was 29,224 sq. ft. On the facade facing the lagoon was a circular dome 150 ft. in circumference that formed a grand, open vestibule, which served as an approach to the building. The inner dome was richly ornamented with ribs and panels, while the outer one was formed by a series of steps rising in the shape of a cone to the apex. An outer row of dome columns was detached, and the entablatures were broken at the head of each, over which was a statue on a pedestal, with a background formed by the stylobate of the dome. This treatment produced a monumental effect, and while in perfect harmony with the architectural style, was both original and interesting. Flanking the central dome were beautiful Ionic colonnades, which formed covered ways along the entire facade, stopping at the corner towers. Over these colonnades were balconies that opened out from the interior galleries of the building. The four corners of the building were marked by square, plain towers, surmounted by ornate, open, columned pavilions, that were circular in form.

The City of Omaha has as one of its most important industries the smelting of gold and silver ores, and the place of honor, in the centre of the building, was given to an exhibit of silver ingots piled one above another, that represented one day's product of white metal from the Omaha & Grant Smelting Company. The weight of the ingots was given as 3,488 lbs. Some idea of the work of this plant may be obtained from the following approximate figures of its output in 1897: Gold, 325,000 oz.; silver, 12,750,000 oz.; lead, 79,550,000 lbs.; copper, 2,660,000 lbs., and blue vitriol, 7,259,000 lbs.

Surrounding this pile of silver were a series of glass cases, in which were shown typical specimens of metals and of gems. In one was an interesting series of gold nuggets from the Klondike region, representatives of every digging known at the time of the opening of the Exposition. Adjacent were beautiful specimens of the soft tufted malachite, and the rarer azurite in various shades of blue, from the well known Bisbee mines in Arizona.

The gem stones shown were remarkable. There were turquoises, cut and uncut, and also in the mother rock, in abundance. Most of these were from the mines near Cerillos, in Grant County, New Mexico. It was from these deposits that the pre-Columbian inhabitants of the "Land of the Sunshine" obtained the material from which they made their bead ornaments. Deep blue sapphires from Yogo Gulch, Fergus County, Montana, and handsome garnets of fiery red were also shown in these cases. Perhaps less fashionable, but equally attractive, were cut specimens of the minor gem stones, peridote and phenacite. A lone diamond from California was shown. Jet from Utah, firm and equal in texture to that from the famous locality of Whitby; also specimens of the glass-like obsidian, likewise from Utah, were evidences of the possibilities of the trans-Missisippi States.

Some ores of iridium and osmium from the western coast were shown. A commercial demand for these rare platinum metals has been made, and these show that it can be filled.

A fine suite of quartz crystals, including the rose varieties and the amethyst, as well as many attractive specimens from the Pike's Peak region, were noted as among the beauties in the cases of the Mining Building.

To the north of the central aisle was the fine exhibit from Colorado under the immediate charge of Mr. Harry C. Smith. A successful effort was made to divide the collection into two portions. First, in flat cases was a mineralogical collection of nearly 1,000 specimens, arranged according to Dana's classification, brought together to show the wide range of the mineral wealth of the State; and, second, along the sides of the enclosure were a series of upright cases, in which were specimens from different parts of the State, arranged so as to show the geographical distribution of the metallic wealth of Colorado.

Among the minerals worthy of special note was a fine lot of agates. Twenty different associations of gold were shown, including also wire, leaf, and placer forms. Conspicuous among the silver ores were specimens from the Aspen mines, notably from the Mollie Gibson. There were telluride ores from the Cripple Creek District and from Boulder County, as well as rich pyrites from Gilpin County. As might have been expected, there were splendid specimens of Amazon stone and the associated pink albite from the well known locality of Pike's Peak. The collection of zeolites was from the cabinet of the State School of Mines in Golden, and included some remarkable specimens of mesolite or thompsonite. From Salida there were sent several of the large green garnets from that locality, one of which, it was claimed, was the largest perfect crystal of garnet in the world. A doubly terminated crystal of topaz from the Mountain of the Holy Cross was shown, and it was said to be unique. Several fine specimens of rhodonite were on exhibition, as well as a large crystal of argentite and some interesting specimens of ruby silver from Ouray County.

Among the specimens that represented the different parts of the State were choice ores from the Cripple Creek District, sulphides from Gilpin County, carbonates from Leadville, and typical ores from Ouray County and the San Juan country. Other exhibits included coal, coke, and fire clay, as well as attractive specimens of onyx and some good building stones. A few fossils were shown, and, finally, a gold mine "in actual operation" was on exhibition as a "side show."

Across the aisle was the section devoted to the exhibit from Montana. This was cared for by Mr. Samuel Anderson. On entering the enclosure was seen a typical lump of ore from the Never Sweat mine, one of the Anaconda group. It weighed 4,000 lbs., and was taken from the 1,300-ft. level. Besides containing 72 per cent. of copper, it assayed from 60 to 70 oz. of silver to the ton and from $2 to $12 a ton in gold. Ingots of silver and copper were also shown. The exhibit, if not so attractively arranged as some others, was certainly an impressive one. Mr. Anderson assured me that the collection had been gathered in less than three months' time.

Among the treasures was a specimen of wire gold from the Monitor Mine, in Madison County, which was undoubtedly the finest of the variety ever found. Mention has already been made of the sapphires and garnets from Montana shown among the gems, but here they were to be seen in profusion. Fully a handful of the blue sapphires from Yogo, in Fergus County, and an equally large quantity of the garnets from Pole Creek, Madison County, were on exhibition, but more startling were the cut specimens of these beautiful gems, which, indeed, were magnificent, showing a fire equal to any Oriental stone.

Some crystals of molybdenite, for which there is now some commercial demand, were on exhibition. Specimens of antimony ore were also shown. Asbestos, resembling that from Italy, from Gallatin County, and gypsum from Cascade County that yielded an excellent quality of plaster, were of special interest. Good sandstones for building purposes, and some blocks of ornamental stones were shown. Much stress was laid upon an exhibit of coke from Belt.

In addition to the $15,000 contributed by the State of Montana, a private gift of a like amount was made by Mr. Marcus Daly, part owner of the Anaconda property, in order that the exhibit of Montana should be second to none, and the exhibit of the State was not surpassed by any in the Mines Building.

Opposite and to the east of the Montana exhibit was that of New Mexico. Besides a rather complete series of ores from different localities, there was not much of interest from a mineralogical point of view, although some attractive specimens of azurite, malachite, and cuprite, combined from the Santa Rita de Cobre Mine, in Grant County, were shown. This mine, which has been worked since 1808, is said to be the oldest copper mine in the United States. It is also from Grant County that the turquoises come, but as they have already been mentioned, it is only necessary to add that a fine collection of these gems was also shown in the exhibit of New Mexico. Some attractive garnets were likewise on exhibition. A number of slabs of agatized wood deserve mention, as well as some interesting specimens of the so-called onyx, now commonly used for interior decoration of many of the larger office buildings, notably in Denver. Some of the specimens of gold quartz shown attracted considerable attention. The Territorial Bureau of Immigration has published a series of small bulletins, and of these the third issue on "Mines and Mining" gives a concise history of the present condition of the mineral developments in New Mexico.

As a memento of the old Spanish civilization in New Mexico, there was shown a church bell from Socorro, bearing the date of 1549. Even older than this was a bottle, said to have been made in Spain in 1387, which, in those early days, had been sent from Rome filled with holy water to Vera Cruz, and thence overland to Socorro. Twice it had made the journey, and now was preserved as a precious relic—perhaps the only remaining piece of glassware on the continent from the early Spanish explorers. The metallic and mineral wealth of New Mexico, as well as the rich historical association of that Territory, were beautifully and characteristically shown by a small table made in Santa Fe. The top consisted of a finely polished slab of gold quartz, beneath which, in filigree work of gold and silver wire, were represented on the four sides the following historical buildings: The "old house," the only remnant of the Pueblo which preceded the Spanish city; the Chapel of San Miguel, the oldest church building in the United States; the ancient Governor's palace, built in 1598; and the modern capitol of the Territory. The table was begemmed with native stones, especially rubies, garnets and turquoises.

Utah occupied the space to the west of that of Montana, and opposite that of Colorado. The great mines of Mercur made an elaborate display of their ores, and the different steps in the extraction of the metal from the ore by the cyanide process were attractively shown in the cases. Some characteristic specimens from Eureka Hill, and from the Anchor Mine, near Park City, are worthy of mention. Specimens of native topazes were on exhibition, and an excellent quality of jet from Carbon County. Gilsonite, ozokerite and other hydro-carbon minerals, as well as asphaltum from typical localities, were shown.

The exhibits of Colorado, Montana, New Mexico and Utah were the largest and most conspicuous of those made, but there were also good displays from nearly every one of the other trans-Mississippi States and Territories, although the specimens shown were, for the most part, masses of crude ore, which were attractive simply on account of their richness. Typical among these was galena, from Washington, that ran from 500 to 1,800 oz. silver to the ton, and also carried gold. Some good specimens of bituminous coal from that State were shown, and also some samples of platiniferous sands containing iridium and osmium. From British Columbia there was exhibited specimens of argentiferous lead from the Le Roi Mine at Rossland.

One of the special exhibits in this building was a case containing some interesting specimens of serpentine made into thin bowls and small tumbler-like vessels coming from the Island of Santa Catalina, off the west coast of Southern California. These little vessels were so thin as to be translucent, and, moreover, they had the merit of being something entirely new; indeed, they were regarded as among the novelties of the Exposition.

Another interesting mineral curiosity was shown in the mining exhibit of South Dakota. It consisted of a fan, the leaves of which were of mica sheets, ornamented along the edges by a fringe of the same material, made by cutting the mica with scissors into thin strings that curled up and simulated feathers.

In the Mining Building likewise was a small exhibit of some specimens of pottery made by Mr. George E. Ohr, of Biloxi, Miss. These were of earthenware, very thin, and covered with a lustrous glaze. There are so few potteries in the Southern States that it was a genuine pleasure to find something new from the Gulf Coast. Nearly a decade ago an attempt was made in New Orleans to produce porcelain equal to that from Sevres, and a well equipped pottery was established. Excellent work was done, but failing to receive a popular appreciation, it soon proved commercially unsuccessful, and to-day all that is left to tell the history of the venture are the few specimens that have survived in the cabinets of the collectors of American pottery. Let us hope that a more successful result may be the outcome of this new venture in Biloxi.

Also in the ceramic line was a series of cleverly modeled animals in unglazed clay, made and exhibited by Mr. Frederick Schmohl, of Chicago. They suggested the larger and more famous work of Mr. Edward Kemeys, and included a group of lions and a bear that were well deserving of praise.

There were two exhibits of pottery in the Liberal Arts Building. One from Trenton consisted of a solid porcelain bath tub, sinks and similar articles for household use. The other was from Red Wing, Minn., and included water filters, umbrella stands, flower pots, and the less attractive, but more useful crocks and jars, all in white glazed stoneware of unusual excellence. In this exhibit were also a number of small models of domestic animals, that had evidently been made to gratify the fancy of the modeler and were not for sale.

As in Nashville, there were also in Omaha two exhibits of the so-called "Mongolian jade-stone carvings." According to the Chinese account: "In the Loo Mountains, of Southern Mongolia, jade, so precious in the estimation of the Chinese, is found encased in a softer stone, which is variegated in color, and is called jade-stone. The stone is only found in small boulders. It is possible to carve this stone into any shape desired, and the Wan Chou artists, having taken advantage of this fact, have carved the animals and birds, the flowers, fruit, and foliage of the district. They have also typified in these carvings the legends of their race, and chiseled into miniature statues their many gods."

These carvings were of many designs, curious and beautiful, and even those of ordinary size attracted attention from their oddity. The coloring of the stone was taken advantage of in carving, and pretty and unique effects were obtained in consequence. Some of the pieces were of an intrinsic and delicate character, and represented the patient labor of months in their production.

Before leaving the Mines Building entirely it should be said that both in the gallery, as well as on the floor, were a number of exhibits of chemicals used in smelting operations. The displays of the Roessler & Hasslocher Chemical Company, whose works are in Perth Amboy, N. J.; the Solvay Process Company, of Syracuse, N. Y., and the Pennsylvania Salt Company, of Philadelphia, were the most conspicuous. The Massachusetts Institute of Technology, of Boston, made an interesting educational exhibit illustrative of mining processes.

Among the State buildings on Bluff Tract, the one that contained most fully typical specimens of the wealth of the State was that of Georgia. A great number of economic minerals were shown, and of special interest were a series of specimens of bauxite, from Floyd County. There were exhibited a number of articles in aluminum made from this mineral by the Illinois Pure Aluminum Company, Lemont, Ill.; Sidney, Shepard & Co., of Buffalo, N. Y., and the Pittsburg Reduction Company, of Pittsburg, Pa. There were also some fine specimens of kaolin from Carr's Station, in Hancock County.

In conclusion, it may be said that displays of the mineral resources of Alabama, Arkansas, California, Colorado, Kansas, Minnesota, Missouri, Montana, Nevada, New Mexico, New York, Oregon, South Dakota, Utah, Washington and British Columbia were made, so that with such material on exhibition it becomes at once evident that, in so far as the mineral and mining exhibits were concerned, the Exposition could not fail of success, and, indeed, it was admitted that in some respects it was superior to the showing made at the World's Fair, held in Chicago in 1893.

XICHMOOK RUINS.—In No. 3, volume II., of the Field Columbian Museum bulletins, Mr. E. H. Thompson gives an account of extensive ruins recently uncovered at Xichmook, in Yucatan. They are evidently the remains of a large town, built in a rocky valley. The ruins consist of 10 separate edifices of stone, with mounds, terraces and reservoirs. Mural paintings are frequent, but mostly obliterated; incised figures are comparatively rare. Pottery is abundant, and also chipped stone implements; while polished stone objects are scarce. Obsidian is slightly represented, and metals were not exhumed. The principal structure, called the Palace, is 80 ft. above the surrounding level, with massive walls.

A NEW ALUMINUM BOAT.—The "Doctor Karl Peters," the boat which carries the name of the German explorer, and which is destined for Lake Victoria Nyanza, in Africa, has made a tour of the Lake of Zurich with the engineers of the makers, Escher Wyss & Co., and invited guests on board, says "L'Electrochimie." This boat, which had its trial trip on July 20th, in presence of German commissioners delegated by the Minister of the Navy, is of aluminum. The conditions of the contract prescribed that no single part of the boat should weigh over 160 kgs., and this condition could not be fulfilled with any other metal. The boat is 13 m. long, 2.7 m. wide, and 1.45 m. deep. It may be detached into nine separate sections. The two boilers are independent of each other, and are for burning only wood. The boat can carry 50 persons. In a short time it is to be taken apart, packed into cases, and sent to the east coast of Africa. There they will be received by a caravan of negroes, escorted by troops of the protectorate and transported into the interior. It is estimated that this transport column will take four months to reach Victoria Nyanza. The "Doctor Karl Peters" makes about 16 km. an hour, and the engine runs at the high speed of 850 revolutions per minute. The cost of the boat is, in round figures, $10,000.

THE OCCURRENCE, ORIGIN AND CHEMICAL COMPOSITION OF CHROMITE.*

By J. H. Pratt.

The author recently, in a paper on the origin of the corundum associated with certain basic North Carolina rocks, called attention to the constant occurrence of chromite in these rocks. A study of what has been written on the occurrence and composition of chrome iron ore, and a field examination of the North Carolina deposits have enabled the author to form some general conclusions.

Investigations in recent years concerning the igneous origin of some ores have shown that a molten basic glass, similar to the basic magnesian rocks, dissolves alumina readily. When it cools, the first minerals to separate are aluminum oxide, corundum and aluminum magnesium oxide spinel. In the case of a cooling mass of rock, this separation would take place first on the outer edges where the rock would cool first. Though many ore deposits have been recognized as having a connection with igneous rocks, it is only recently that some of these deposits have been shown to be unquestionably of igneous origin. Among these are the titanic iron ores and the sulphide ores containing nickel.

Extending from Tallapoosa County, Ala., to Trenton, N. J., is a narrow belt of basic magnesian rocks—peridotites, etc.—showing disconnected out-crops. The belt probably continues across New York and New England, but the out-crops are fewer, and the belt not so continuous. In North Carolina the prevailing rock in this belt is the very basic magnesian rock dunite, but in the northern portion of the belt the original rock has been changed to the secondary rocks, serpentine, talc, etc. The occurrence of the peridotite rocks of this belt, their relations to the adjacent gneisses and their general character are almost conclusive indications of an igneous origin. Associated with these peridotites is the mineral chromite, or chrome iron ore, which occur in imbedded masses, and as scattered crystals or grains.

From our present knowledge of chromite we can say that it is always found in peridotite rocks. In the deposits the author has seen the chromite masses nearly always occur near the boundaries of the lenticular masses of peridotite, not in well-defined veins, but in apparently unrelated masses. The large deposits seen have always been in the peridotite and near its boundary with the inclosing gneiss. When the chromite occurs as grains these are most numerous along the contacts, and diminish toward the center of the peridotite mass. This peculiarity goes to show that the chromite was held in solution in the molten peridotite when this was intruded into the country rock, and that it was among the first minerals to separate out as the mass began to cool.

Such an origin accounts for the pockety nature of chromite deposits, the way they widen or pinch out and their apparent lack of relation.

The association of platinum with chromite and serpentine in various parts of the world where platinum has been found in alluvial deposits, indicates that the origin of platinum may be a peridotite or similar igneous rock. Platinum has been found in place with chromite in the Urals, and it may yet be found in the peridotite areas of the United States.

A review of the various analyses of chromite and a careful study of the composition of the North Carolina ore goes to show that the molecule of the mineral, commonly called chromite, is not pure $FeOCr_2O_3$, but a combination of the three isomorphous molecules $FeOCr_2O_3$, $MgOCr_2O_3$ and $MgOAl_2O_3$, and that pure $FeOCr_2O_3$ is not common in nature. As the chromium is replaced by magnesium, chromite approaches spinel as its limit. The analysis of specimens of Pine Creek, North Carolina, chromite showed a probable composition represented by the formula 10 FeO, Cr_2O_3, $MgOCr_2O_3$, 2 MgO, Al_2O_3.

*Abstract of paper read before the New York Academy of Sciences.

RECENT DECISIONS AFFECTING THE MINING INDUSTRY.

Specially Reported for the Engineering and Mining Journal.

ASSUMPTION OF RISKS BY MINER.—When a position like that of shot worker in a coal mine is dangerous, the dangers of such position are incident to the employment, and are assumed by the person employed.—Muddy Valley Mines & Manufacturing Company vs. Parrish (74 Appellate Court Reporter, 559); Appellate Court of Illinois.

RIGHT OF SUBSEQUENT PURCHASER AGAINST PIPE LINE.—The owner of a lot conveyed to a gas company a right of way over the lot for a pipe line. This conveyance was never recorded. The land was subsequently sold at sheriff's sale, and the purchaser commenced to build a house over the pipe line. The pipe was laid at a depth of 10 ft. and there was nothing on the surface to indicate that any pipe was laid there and the purchaser had no actual knowledge of its existence. The court held that the grant of the right of way was void as to the subsequent purchaser.—Philadelphia Company vs. Raum (28 Pittsburg "Legal Journal," 440); Pennsylvania Court of Common Pleas.

RIGHTS OF MINING CLAIMANT AGAINST FRAUDULENT ENTRY.—Where one has fraudulently obtained a patent to land under the timber act, one who has made a valid location of the land as a mining claim may bring suit against the patentee to have his title declared to be held in trust for the one entering the mining location, and for a conveyance to him, although the laws of the United States (U. S. Statutes 20, 1889) declare that one who fraudulently obtains a patent under the timber act shall forfeit "all right and title to the same; and any grant or conveyance which he may have made except in the hands of bona fide purchasers shall be void." Such fraudulent patentee is not entitled to recover of such locator the expenses in obtaining such patent. —Mery vs. Brodt (53 Pacific Reporter, 818); Supreme Court of California.

A TURQUOISE DEPOSIT IN MOHAVE COUNTY, ARIZONA.

Written for The Engineering and Mining Journal by A. B. Frenzel.

About 20 years ago a number of claims, located for copper, were later abandoned, analyses showing too small a percentage for profitable mining; 12 years later several claims were located for turquoise, but remained undeveloped until the month of August, 1898, during which time prospecting uncovered what is to-day a great deposit of promising gem material. From Kingman the Cerbat Range extends a little west of north to the Colorado River, and near Mineral Park is what is locally known as Turquoise Mountain, about 20 miles from Kingman, readily accessible at all times, and but two miles from the railroad now under construction from the main line to Chloride. In 1858 Prof. Wm. P. Blake published data relating to turquoise, and since then many other writers of note have referred to this subject, an epitome of which appear in Kunz's admirable edition de luxe, "Gems and Precious Stones of North America." As this reference gives a comprehensive history of the various localities where the gem is found in this country, together with illustrations of great interest, this article will relate solely to the property lately opened.

Turquoise Mountain differs in no way from other peaks in the range, and there are no precipitous walls or gulches; neither are there surface indications of mineral other than turquoise float in great quantity. In prospecting on all sides of the mountain there are a number of terraced camping grounds formerly occupied by the Indians, who worked the deposits, and in a few places evidences of very large dumps. One of these terraces was selected and the open cut accidentally disclosed an ancient Aztec shaft, about 5 ft. in diameter, which was uncovered to a depth of 8 ft. An Indian is shown, Fig. 1, standing in this shaft. Here were found a number of stone implements—hammers, gads, chisels, etc.—all more or less worn. The shaft was filled with float to the depth of about 18 in. from the surface; the total absence of stone of any kind deeper down showed that it had been purposely filled in. Evidences led to show that mining was done by first building a fire and then throwing water on the hot surface, and later using stone implements. These ancients were good miners, the walls of the shaft being extremely smooth in finish and free from tool marks. In close proximity to the workings the writer picked up a large number of tools of stone, Fig. 2. Some of these hammers are from 10 to 11 in. long and weigh over 15 lbs. Evidently the users of these immense hammers were men of unusual size. The cut was quarried about 25 ft. straight into the side of the mountain, irrespective of the numberless veins of turquoise (some of which were true and continuous), until the cut was completed. There appeared two kinds of veins: some were perfect planes without divergence; others were angular and irregular, all changing in color as depth was gained; surface material showing a pronounced copper stain of green, but later changing to a decided blue. Owing to oxidation and surface leaching, the turquoise did not become hard and solid until depth was gained, but from the outset the characteristic nodules, so greatly desired, were found in what looked like kaolin, shaded from pale to a decided buff color on the outside, but when opened were blue within. The country rock is a partly decomposed, gold-bearing quartz, sometimes of a beautiful rose color and occasionally translucent. Near the top of the mountain are porphyry dykes and iron stained sandstone and quartzite, below which, and apparently extending clear through the mountain, on the same level, is the turquoise bearing stratum. Large blocks of stone, traversed by the blue veins, have been sent to New York to be cut and finished as bases for bronzes, clocks, cups, etc., and later, pieces of unusual size will be quarried for columns, mantels, pedestals and ornamental stone work.

Turquoise in mass is a great rarity. In a letter of thanks, after receiving a piece weighing 9 oz., Prof. Wm. P. Blake writes as follows: "I wish to thank you particularly for the mass presented to me by you. It is the largest single piece of turquoise I have ever seen, free from foreign matter, and although not available as a gem, it having been taken from near the croppings, it gives good evidence of rich and perfect material below."

Turquoise is a hydrated phosphate of alumina, H. = 6, G. = 2.6 — 2.8, soluble in hydrochloric acid. In modern times no gem has been so often and closely imitated except the diamond. Owing to the copper present the color varies according to the percentage, and sometimes atmospheric conditions are influential in changing the color of fine gems. Notwithstanding this, a firm in this country guarantees the color of all gems sold by them, an apparent fraud from the beginning. The following quantitative analyses are given to show that the determination by a chemist will eliminate the possibility of palming off either spurious gems or spurious deposits:

OPENING IN ANCIENT MINE WORKINGS, ARIZONA.

Color.	1. Bright blue.	2. Pale blue.	3. Dark green.	4. Blue green.
Phosphoric acid	31.96	32.86	28.63	33.21
Alumina	39.53	36.88	37.88	35.98
Ferric oxide		2.40	4.07	2.99
Copper "	6.30	7.51	6.56	7.80
Lime	0.13	0.38	....	....
Silica	1.15	0.16	4.20	....
Water	19.80	19.60	18.49	19.98
Specific gravity	....	2.805	....	2.806

Analyses 1, 2 and 3 are reported by F. W. Clarke in the "American Journal of Science," III., volume 32 (September, 1886). No. 4 is given by Dr. Gideon E. Moore, "Zeitschrift fur Krystallographie and Mineralogie," 10, 240.

COST OF COAL AND COKE IN GERMANY.—A recent report of the Harpen Coal Company, in the Westfalen District, Germany, complains of the increased cost of labor. The company mined, in the year ending June 30th last, 4,238,210 metric tons of coal, the average cost of mining being 5.83 marks ($1.38), against 5.50 marks ($1.31) for the preceding year. The average selling price was 8.38 marks ($1.99), against 8.09 marks ($1.93) in 1896-97. From the coal-dust the company made 48,453 tons of briquettes, at a cost of 2.89 marks ($0.69) a ton. It was able to pay 9 per cent. on the stock in dividends.

The company's coke plant turned out 840,070 metric tons of coke, the average yield of the coal being 80 per cent. in coke. The cost of making the coke last year was 1.18 marks ($0.27) a ton. The average selling price was 11.77 marks ($2.80), which is an increase of 1.69 marks ($0.40) over the previous year.

ABSTRACTS OF OFFICIAL REPORTS.

Grand Central Mining Company, Mexico.

The report of the directors for the year ending August 31st, 1898, gives no details of operation, but says that the accounts for the year show a net realized profit at the mine of £86,459, to which must be added a sum of £14,588, carried forward from the previous year, making a total of £101,047, out of which £2,095 has been paid for income tax and £26,008 has been spent on improvements to the property, properly chargeable to capital expenditure, and which, following the policy adopted last year with the approval of the shareholders, has been written off revenue account, leaving a balance of £72,944.

On May 28th an interim dividend of 2s. per share, amounting to £25,000, was paid, which leaves a balance of £47,944, out of which sum it was decided to declare another dividend at the same rate, payable September 15th, which was done, leaving a balance of £22,944 to be carried forward to 1898-1899.

The report says: "As regards the mine itself, the directors are glad to be able to report most satisfactory progress. During the year there has been exposed a very large and rich ore body, and the developments continue to be good. The manager reports that there are now 157,150 tons of ore reserves actually in sight in the mine, and all the developments lead to the expectation that this quantity will be considerably increased in the near future. The ore being rich, the profits are large, and there is every reason to think that the favorable outlook will continue. An extraordinary expenditure on capital account of £55,551 has been paid entirely out of the revenue during the last two years, and it will be satisfactory to the shareholders to know that they are to-day in possession of a first-class plant in every respect."

Harquahala Gold Mining Company.

The brief report of this company for the year ending June 30th, 1898, says: "The revenue account shows a loss for the year of £5,574, of which £3,607 represents work done on the Kalgoorlie leases, and £1,105 the difference between the company's proportion of the bullion produced at the Arizona Mine by the lessess, and the cost of milling the ore, and all other expenses in Arizona. The Arizona operations, however, gave a small profit for the year, the apparent loss resulting from differences between the realized value of bullion dating from the commencement of cyanide operations, and only adjusted when all work finally ceased. The balance at the credit of revenue account is thus reduced to £257. The amount of unexpended capital is £9,699, and there also remains a reserve for machinery and plant renewals of £846.

"During the year some further exploration work was done in Arizona on the lines suggested by Mr. Bennett, but nothing resulted. The mines and mill have now been let on a fresh lease to the same lessees, and work was resumed last month. The terms granted will allow a clean-up of much of the low grade ore remaining in the mine, and the company will receive a percentage of the bullion recovered by way of royalty and a rent for the use of the machinery.

"On the Kalgoorlie property the main shaft has been sunk to the 300-ft. level, and a crosscut has been driven east in the direction of the small vein encountered above, but no pay ore has so far been found. On most of the adjoining properties work has been suspended, and appearances seem to indicate that beyond traces of gold this part of the field has little in common with the southern end, where are situated the well-known wonderfully rich mines.

"Mr. Raymond has been constantly on the lookout for another property worth recommending to the company, and has examined many propositions with this in view, but so far has found nothing. While work is continued in Arizona and West Australia, it seems advisable that the organization of the company should be maintained, and there is also the possibility of a property being found that would be worth taking hold of with the remaining capital as a nucleus. It is, therefore, proposed to reduce expenses to a nominal figure and await events."

The stockholders have voted to authorize the directors to acquire another property, with the unexpended capital on hand.

Montana Mining Company, Limited.

The report of this company covers the half-year ending June 30th, 1898, during which 38,215 tons of ore were mined and treated in the mill, and 27,760 tons of tailings were treated in the cyanide plant. The total gross earnings were $329,533; the working expenses $294,697, leaving a balance of $34,836. From this is to be deducted $27,133 for new plant and construction, leaving a surplus of $7,703. This, transferred to sterling at the London office and added to balance from previous half-year, made a total of £1,694. London expenses, less transfer fees, interest, etc., amounted to £1,360, leaving a balance of £334.

The earnings and expenses for the half year were as follows:

	Earnings.	Expenses.	Net Earnings.
Mining and milling ore.....	$265,380	$248,321	$17,059
Treatment of tailings.....	64,153	46,276	17,777
Totals	$329,533	$294,697	$34,836
Mining and milling, per ton.	$6.94	$6.50	$0.44
Tailings treatment, per ton..	2.31	1.67	0.64

Of the recovery from ore 92.1 per cent. of the value was in gold and 7.9 per cent. in silver. The recovery from tailings showed 81.1 per cent., in value, gold, and 18.9 per cent. silver.

The report of Manager Alexander Burrell says that the entire combination process was carried on throughout the 50-stamp mill until the end of May, when nearly all the stopes producing the grade and character of ore suitable for pan-amalgamation having become exhausted, that part of the treatment was discontinued so far as regards the 30-stamp side of that mill. Consequently, since June 1st, the ore from 90 stamps in the two mills has been treated with plates and vanners only, while that from the remaining 20 stamps in the 50-stamp mill has been subjected to the combination process in its entirety.

Operations at the dam tailings plant were begun as early in the spring as the weather would permit, on April 18th, and were continued without interruption until the end of the half-year, being a period of 2 1-3 months—the tailings treated being drawn exclusively from Dam No. 5. On May 17th two new sand vats were brought into use, permitting the plant to profitably treat a greater percentage of the fine sand from this dam by allowing more time for leaching. The average value of the product was $2.31 per ton of tailings treated, which is 14c. more than for the half-year ending December 31st, 1897. On the other hand, however, the actual cost of treatment and transport amounted to $1.35 per ton, being 18c. per ton higher than for the preceding half-year, but this includes an abnormal expense of over $5,000 (or exactly the difference in question, 18c. per ton) for sluicing tailings from the upper dams into Dam No. 4-a, and re-arranging the railway tracks in Dam No. 5. The net profit derived from this source was $17,777, or 64c. per ton.

The total development work, in drifts, winzes, upraises, crosscuts and shaft sinking, amounted to 4,650 ft.

The directors' report says: "By the last report shareholders were advised that the St. Louis Company had carried their appeal in the specific performance suit to the Supreme Court of the United States at Washington. By circular of November 2d shareholders were informed that the Judges of the Supreme Court had given a unanimous verdict in favor of this company, confirming all decisions previously given in its favor. Against this decison there is no appeal.

"The new Riedler Pump (No. 2), which was installed and started in the early part of the year, is doing its work satisfactorily.

"Although a large number of properties have been offered to the company, and examined by its experts, none of them have proved desirable. The directors will not relax their efforts to acquire a suitable property when met with.

"Owing to the low grade of ore met with, the result of mining operations for the half year was of a disappointing nature. The average realized value of the ore passed through the mills was $6.94, as compared with $7.98 per ton in the previous half year, showing a decrease of $1.04 per ton. On the other hand, the expenditure was $6.50, as compared with $6.74 per ton in the previous half year, the net result being a decrease of $0.80 per ton on the 38,215 tons which were passed through the mills."

COPPER MINING AT KAMLOOPS, B. C.

Written for the Engineering and Mining Journal by W. M. Wade.

The City of Kamloops, in British Columbia, is a divisional point on the Canadian Pacific Railway, and a place of some importance. Around it is a large tract of farming and pasture country. The Thompson River, on which the town is situated, is navigable for several hundred miles. Kamloops is also likely to be the southern terminus of a projected railroad from the Canadian Pacific main line to the northern gold-fields.

Behind the town, the bench lands rise to the level of the general plateau, and above that are several prominent hills, one of the most important being Coal Hill, which is believed to contain large deposits of copper ores. Copper stained earth and rock were noticed by ranchers and others years ago, but it was only in 1896 that the value of these indications was recognized, and in July of that year the first claim located on Coal Hill, the Python, was recorded. Within a few weeks hundreds of claims were staked out. Prospectors flocked to the new camp; the townspeople took the fever, and it was the exception to find the man who did not carry several pieces of rock about with him.

The mineral belt thus discovered has been found to cover an area measuring approximately from 12 to 15 miles from east to west, and about 6 miles from north to south. Eranite, diorite, hornblende, syenite and gabbros are the prevailing rocks. The ores are found as shoots of clean ore, or in gores of highly mineralized rock; true veins are not common, this camp in this respect being similar to that of Rossland. Within the two years since the Python was located work has been done in a small way on a large number of claims; in a few instances work has been pushed forward more vigorously, with promising results. The Python has a shaft down about 60 ft. and nearly as much more done in drifting. After a period of quiescence—awaiting funds—work is to be resumed, and the owners hope to prove this a mine. At present it is a capital prospect.

The same may be said of the Iron Mask, about a mile west of the Python, where clean ore was struck under 30 ft. from the surface, that, at the Everett smelter, yielded 0.1 oz. gold and 17.50 per cent. copper. Near this are several promising claims, the Erin, the Norma, and the Consolidated Virginia. The Iron Mask consists of a group of several claims. Unfortunately, the owners, non-residents, will not work it themselves, nor will they sell at a reasonable figure. But a short distance west is the Iron Cap, and adjoining it the Fragment. Ore from the Iron Cap has yielded $58 per ton in copper and gold at the smelter. There is an inclined shaft down 70 ft. on the Iron Cap, and several open cuts on the Fragment.

Two miles further west there is the Pothook group. Here several claims in a group were bonded, including the Pothook, on which there was a large surface showing of copper-stained rock. This was sunk upon, and the results were considered sufficiently satisfactory to warrant further expenditures. The bonds were promptly taken up before the time limit, and work pushed. If the ore encountered at the 160-ft. level is present in quantity—the shoot is 19 ft. wide—the Pothook will rival some of the best known claims in Kootenay. The shaft is down 225 ft., and several drifts have been run. A steam hoisting plant is to be installed before the new year. The ore found in this property consists of bornite, tetrahedrite, chalcopyrite and native copper.

South from the Pothook is Sugar Loaf Hill, which is staked from base to summit; but little has been proved to exist on any of the claims, with the exception of the Chieftain group, on which several shafts were sunk, two of 50 ft. each. The ore is chalcopyrite and iron pyrites. Assays of $21.50 in gold were made of ore from the bottom of one shaft, with 10 per cent. in copper. On a few adjacent claims there are fair indications, but the expenditure of money is needed to show what is there.

Eastward of Sugar Loaf and south of Coal Hill is Jacko Lake, and around its shores and on the broken hill surrounding it there are a

number of locations. The Ajax and Hercules, the Possum, the Lone Boy, the Monte Carlo and the Alpha have had prospect shafts sunk on them varying in depth from 10 to 50 ft., with good indications.

A few miles more to the east is the Cyclone group, where there is an extensive mass of ore, the vein being visible on the surface for 3,000 ft. Arrangements are now being made to work these claims systematically.

To the northwest again, and under Coal Hill, is the Kimberley group, which comprises six claims, on which three or four ledges have been exposed. The ore found is that common to the camp, chalcopyrite, and carries gold values.

In addition to these prospects there are a number of others of equal import upon which work will be done.

North and south of Kamloops are extensive coal beds, which could supply a smelter. The deposit of coal at the base of Coal Hill, from which the name was taken, is too insignificant to be seriously considered. Iron ore is found in workable quantities and quality at the mouth of Cherry Creek, a few miles west of Kamloops, the property being known as the Glen Iron Mine. Many tons of ore have been shipped to Tacoma, the smelters there purchasing it for flux.

North and east of Kamloops is the continuation of the silver-lead belt from the Slocan. It crops out near Adam's Lake (where is a group of claims, the Homestake); on the North Thompson River; on the Clearwater, and north of Quesnelle Lakes. Westward at Copper Creek, near Savona, some 25 miles distant, is a deposit of cinnabar, where some work has been done. Another copper area also exists in the same neighborhood.

A NEW AUSTRALIAN SILVER FIELD.

Written for the Engineering and Mining Journal by John Plummer.

The existence of extensive silver lodes in New South Wales at other places than Broken Hill has long been known, but the difficulty hitherto experienced has been the absence of smelting works, necessitating the shipment of the ore to Europe for treatment, the enhanced expense thereby occasioned naturally reducing the prospects of profit. With the establishment of the great works at Dapto, on the southern coast of the colony, and at Cockle Creek, near Newcastle, together with the projected construction of others in various mining centers, a powerful impetus has been given to mining. For several years past silver was known to exist in the Burragorang District, a wild and almost inaccessible tract of country, within a few hours of Sydney, but the absence of roads and the precipitous nature of the locality tended to deter prospectors. A road has, however, been cut, zig-zag shape, in the face of the rock into the Burragorang Valley, thus enabling a couple of silver mines to be opened and worked. Should these answer the expectations formed by the proprietors, the next few years will see this part of New South Wales overrun by prospecting parties. At present it is frequented chiefly by adventurous tourists, the scenery being of the grandest character imaginable, the precipitous rocks forming the sides of the valley rising, in places, to a height of nearly 2,000 ft. above sea level. It is a perfect network of immense glens and ravines, filled with huge masses of fern and sub-tropical vegetation, which have remained unexplored to this day.

AZTEC MINING IMPLEMENTS FROM ARIZONA.

On one of the mines, leased partly from the Crown, partly from private individuals, silver was discovered some few years ago, but nothing was done at the time. Here is an argentiferous lode, 3 ft. in width, being heavily impregnated with galena and pyrites. A smaller vein, some little distance away, was found to join the main lode. From the latter two tone of ore, taken from what are now known as the old workings, yield at the rate of 40 oz. per ton. The new workings, about 900 ft. south of the former, give more encouraging results. Here a shaft has been sunk on the underlay of the lode for a distance of 90 ft., disclosing a good and well defined ore channel, averaging 5 ft. in width, with excellent walls. The dip is about 45° west, the strike being north and south. The rocks in the vicinity appear to be felsite, diorite and granite. The ore shown in the shaft is a low grade, giving from 20 to 100 oz. of silver, with a varying proportion of lead, per ton. About 40 ft. down the shaft a crosscut has been put in, south and southwest, showing a body of ore fully 5 ft. in thickness. The ores here are both oxidized and sulphide. Some 12 tons sent to the works at Cockle Creek gave 135 oz. of silver, 45 per cent. of lead, and 0.25 oz. gold per ton. A second shipment of 10 tons yielded similar results, and a third lot is under treatment. There is an immense quantity of lower grade ore on the ground, which would pay for treatment if local reduction works were established. The outcrop of the main lode can be traced for several hundred feet.

In the second mine, belonging to another owner, a considerable quantity of good ore is being raised, and the lode appears to be a rich one. The general impression among the miners is that a silver field of considerable extent will sooner or later be opened, and that alluvial gold

GOVERNMENT DIAMOND DRILLS IN ALGERIA.—The French Government has authorized the Governor-General of Algeria to acquire four sets of boring plant, thus bringing up the total number to seven, intended to be placed at the disposal of communal authorities or individuals who may desire to put down boreholes. The apparatus is lent gratuitously; but the borrower must defray the cost of maintenace and the travelling expenses of the Ponts et Chaussees agent accompanying the apparatus on its forward and return journey, while also making good any part lost or deteriorated, unless relieved from this latter condition by the Prefect.

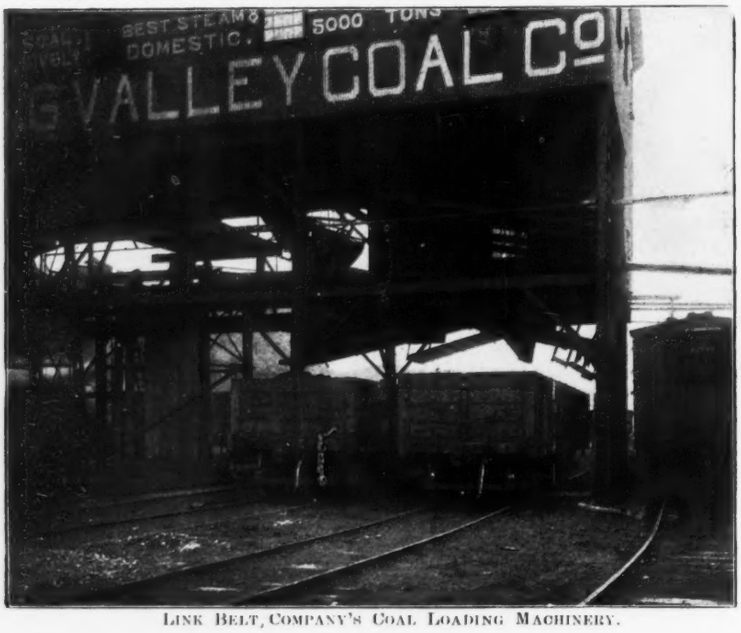
PETROLEUM IN THE WESTERN CAUCASUS.—A statement recently made to the Academie des Sciences, at Paris, by Capt. Venukoff, says that on May 14th, 1898, researches conducted by a Russian mining engineer and a French agent resulted in the proving of sand-beds soaked with naphtha in the neighborhood of Anaclia in the Western Caucasus. The water which accumulated in the preliminary excavations soon became covered with a layer of liquid naphtha. It is proposed to start boring at once, and it is expected that Anaclia is destined to prove a formidable rival to Baku; its situation on the Ingur, near the point where that river opens into the Black Sea, makes it much more accessible to European trade than the famous petroleum city on the Caspian. The land owner is the Prince of Mingrelia, and the rights of working the oil wells have been conceded to Mr. Mindovsky, a Moscow capitalist.

will be found on some of the rivers at present unprospected. The two mines now being worked are in that part of the Burragorang Valley where it spreads out fan-shape. Here a number of claims have been pegged out, but no work done, the hard nature of the ground making prospecting a somewhat expensive labor. As the work at the two mines proceeds there will be no lack of local money to extend operations, and although there is no prospect of the field ever rivalling the productiveness of Broken Hill, it may prove an important factor in increasing the silver output of New South Wales.

APPARATUS FOR LOADING COAL AT THE MINE.

The accompanying cut is a partial view of the steel tipple building at No. 1 shaft of the Spring Valley Coal Company, at Spring Valley, Ill., and shows what is probably the most perfect arrangement at present in use for weighing and screening bituminous coal at the mine. It consists of a steam operated weigh-box and a pair of shaking screens. The shaking screens are arranged to make four different sizes of coal, delivering them either separately or in various combinations to cars on the four tracks shown. As the lump coal at this mine is very largely loaded into box cars on the outer track, a special apron has been fitted to the end of the screen in such a way that it can be quickly and easily removed from or entered into a box car, or adjusted to load an open car. To do this only requires, as long as is needed to enter the box car loader used at this place, or in the case of the open car to bring the car into position under the apron. The entire apparatus has a capacity for weighing and screening four pit cars a minute, and was designed, built and erected in running order by the Link-Belt Machinery Company, of Chicago.

At this mine the entire equipment, including screening and loading arrangements, the steel tipple buildings, hoisting engines, Capell fans, shaft bottom, and, in fact, everything about the works, is of the latest and most approved type, and, as stated, constitutes what, as a whole, is probably the most complete thing of its kind in existence in the Western bituminous field.



LINK BELT COMPANY'S COAL LOADING MACHINERY.

THE NERNST ELECTRIC LIGHT.

In this new form of electric light, as described in "Science," the inventor, Prof. Nernst, employs magnesium oxide for the illuminating material which at ordinary temperatures is a non-conductor, but when heated to a sufficiently high degree (and herein lies Prof. Nernst's discovery) becomes a perfect conductor and emits a brilliant white light. The preliminary heating of the magnesia A, Prof. Nernst accomplishes by placing it in the focus of a reflector C, as seen in Fig. 1. On the inner side of the reflector is a spiral wire of platinum D, which, when brought to incandescence by a current, produces heat sufficient to render the magnesia a conductor; a current is then passed directly through the oxide by the wire B, and that in the spiral is shut off. A complicated form of lamp is seen in Fig. 2. Here the magnesia A is placed within a cylinder C, which also incloses a platinum spiral D. As soon as the incandescent spiral has heated the magnesia sufficiently a current is passed through the oxide by the wire B. Within this circuit is a coil G, which, upon becoming magnetic, draws down the iron bar E, thus lowering the now incandescent magnesia from within the cylinder. Upon breaking the circuit the coil loses its magnetism, and a spring F raises the iron bar and the magnesia to their former position.

As advantages over the ordinary incandescent lamps, Prof. Nernst claims that the same amount of light can be furnished at one-third the cost; and as the magnesia can be heated to a much higher degree than a carbon filament, a purer light is obtained. In operating either an alternating or a direct current is used.

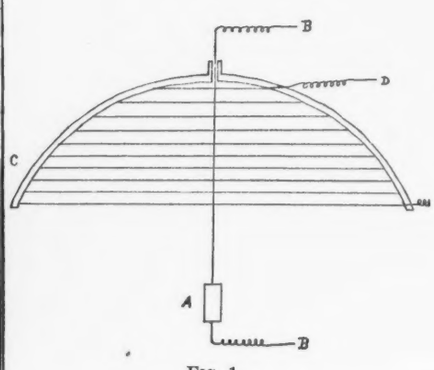


FIG. 1.

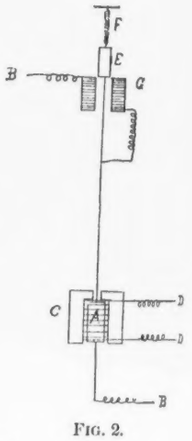


FIG. 2.

NERNST ELECTRIC LIGHT.

THE COLORADO ELECTRIC POWER COMPANY'S PLANT.*

By Ralph D. Mershon.

The Colorado Electric Power Company was formed in 1897 for the purpose of furnishing power to the mines of the Cripple Creek District. The organization was due to D. V. Donaldson, of Colorado Springs, and the late O. B. Shallenberger, of Rochester, Pa. The first intention was to use water-power, but this was given up in view of the existing irrigation rights on the streams and the large reservoir which would be necessary to avoid interference with those rights. A site was chosen for the power station at Canyon City, as this point offered many advantages for the economical generation of power, chief among which is its nearness to the coal fields.

The station is located so as to be accessible from both of the railroads entering Canyon City; coal can be delivered from either of them on to a side track and unloaded thence directly into the coal bunkers. It is near the Arkansas River, from which water is taken for condensing purposes, and, if it should become necesssary, coal may be delivered to it by a downhill wagon haul from the mines owned by the company.

The building is a substantial structure of brick and steel, and at present represents just half of what the completed structure will be, as both the building and equipment have been laid out with a view to an increase of capacity when business shall demand it, the increase to be made without interfering in any way with the operation of the plant.

The fire-room equipment consists of a battery of Heine water-tube boilers, manufactured by the Heine Safety Boiler Company of St. Louis; the condensing apparatus, consisting of surface condensers, with combined air and circulating pumps, made by the Snow Steam Pump Works of Buffalo, N. Y.; Snow feed pumps; Wainwright corrugated tube heaters, made by the Taunton Locomotive Manufacturing Company, Taunton, Mass. The boilers, pumps and condensers have such a capacity and are so arranged that one unit is always idle as a reserve in case of emergency. The stack is of steel, guyed, and resting upon a substantial brick base. The water suppply for the surface condensers is taken from the Arkansas River at a point about 400 ft. above the station, and is brought by a wooden flume to the settling tank, whence it is drawn by the circulating pumps, sent through the condensers and discharged again into the river.

The steam equipment of the engine room consists of the three main engines, and two exciter engines. The main engines are Hamilton-Corliss cross compound condensing engines, with receiver and re-heating coil, made by the Hooven, Owens & Rentschler Company, Hamilton, O. They take steam at 125 lbs., and their speed is 100 revolutions a minute. Though they normally run condensing, they may be run non-condensing in case of emergency, and will carry their load under those conditions. Each one is direct connected to a Westinghouse three-phase generator delivering current at 500 volts and 3,600 alternations per minute, 30 cycles per second. The exciter engines are Westinghouse "standard," running at 350 revolutions. They take steam at the same pressure as the main engines and exhaust into the heaters, as do also the pumps in the fireroom. Each exciter engine is connected by means of a spring coupling to a Westinghouse 125-volt direct-current dynamo. Either of the exciter rigs is capable of exciting all of the main generators. The nominal rating of the main generators is 470 kw. each, but the specifications on them and the engines were such that the three generating units are together capable of delivering something over 2,000 H. P. In operation, one of the main generators will be kept idle as an emergency reserve.

The current from the main generators and exciters is carried by cables in tunnels under the station floor, each to its own switchboard. The exciter switchboard is of the Westinghouse standard type, consisting of two marble panels—one for each exciter—on which are mounted the usual instruments and switches. The main switchboard has four panels

*Abstract of article in the "American Electrician," December, 1898.

—three generator panels and one load panel. Each generator panel has besides the usual field plugs, rheostat and main switch, three ammeters, one for each machine lead, and two Shallenberger indicating wattmeters, the sum of whose reading gives the output of the generator.

The load panel has three ammeters and two wattmeters. The sum of the wattmeter readings is the total output of the bus bars. The ammeters, however, do not indicate the bus bar currents; each measures the current to one of the three step-up transformers, and is thus a ready means of detecting and locating any incipient trouble in the transformers or any unbalancing of the load. The additional instruments are three voltmeters and a synchroscope mounted as an arm at one end of the board so as to be visible from each panel. The synchroscope can by means of plugs be used for synchronizing any machine with the bus bars. One of the voltmeters can be plugged on to any phase of any machine.

Of the remaining two voltmeters one at all times indicates the voltage of the bus bars; the other in connection with a compensator indicates at all times the voltage on the secondary distribution circuits at Cripple Creek, and thus enables the station attendant to hold the distribution voltage at any desired value.

None of the instruments on the board carry the main current; they receive current from the secondaries of series transformers, whose primaries are in the main leads. These series transfomers are mounted upon a rack behind the switchboard. There has been left between the main switchboard and the exciter board a space for additional panels, when the plant shall be extended. Mounted upon a mahogany panel, which will form a part of the completed switchboard, are a steam gauge, vacuum gauge and recording pressure gauge, this arrangement bringing the operation of both the steam and electrical machinery under observation at one place.

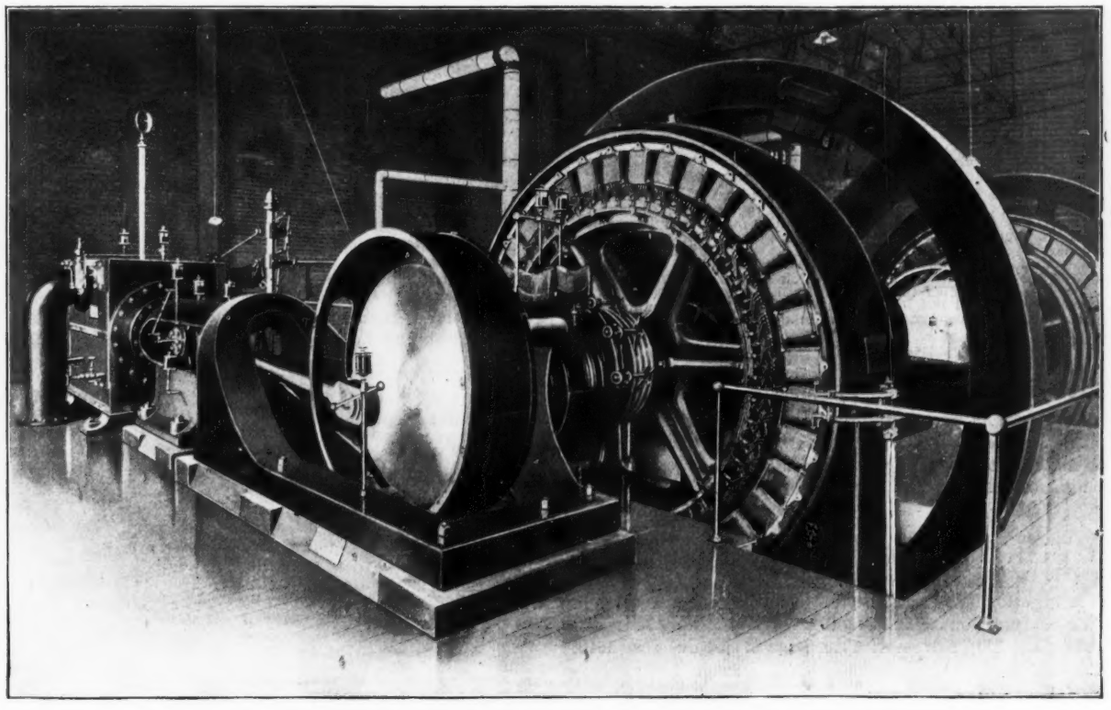
From the switchboard the current goes overhead to the step-up transformer house. The cables carrying it are brought down along the wall of this building to the transformer switches, which are mounted upon the wall opposite their respective transformers. From the switches cables go under the floor of the transformer foundations and pass up through them to the transformers.

The step-up transformers are four in number, one being always idle as a reserve. They are the Westinghouse self-cooling oil transformers, the tanks containing them being made of sheet iron and with a number of corrugations obtaining the necessary radiating surface. They raise the voltage from 500 to 20,000 volts. Both the high and low-voltage coils of the three transformers in service are connected in delta, so that one transformer may at any time be cut out without interfering with the running of the plant. This allows a damaged transformer to be replaced by the reserve transformer without interrupting the service, an advantage which the Y-system of connection lacks. The arrangements for throwing in the relay to replace one of the transformers in service are simple, and such that the substitution can be made in a few minutes. It is accomplished on the low-voltage side by means of a pair of relay cables and double throw, double pole switches for each of the three transformers normally in service; on the high-voltage side by means of double pole circuit breakers, of which there is one for each transformer, and long-handled plugs, by means of which the relay is plugged onto the proper pair of 20,000-volt bus bars.

In addition to a hand-dripping device the high-voltage circuit breakers are arranged to open automatically whenever energy passes through them in the wrong direction; that is, whenever a transformer becomes disabled its circuit-breaker will disconnect it from the 20,000-volt bus bars. Any trouble in a transformer which will cause its high-voltage circuit breaker to open will also blow the fuses in its low-voltage leads. The result is that a damaged transformer is automatically cut out. Two of the raising transformers are capable of carrying the full output of the station indefinitely, so that as far as continuity of service is concerned, there is a reserve transformer capacity of 100 per cent.

From the 20,000-volt terminals of the transformer the current is led straight up to the high-voltage circuit breakers, and from there to the high-voltage bus bars. Both the circuit breakers and the bus bars are carried up on a wooden rack overhead—everything out of reach, with the exception of the insulated handles for operating the circuit breakers. On this same rack are mounted the plugs and sockets for switching the 20,000-volt end of the relay transformer. From the bus bars the current passes at 20,000 volts through the main plugs for disconnecting the main line from the high voltage bus bars, main fuses and choke coils, which, in connection with a bank of Wurts non-arcing arresters, protect the station from lightning discharges. All this apparatus is overhead. From the choke coils the three 20,000-volt leads pass through glass tubes in the end of the building to the transmission line. All the low voltage mains and switches are confined to one side of the building, while the high-voltage apparatus is all on the other side, overhead, and out of reach.

The method of handling the transformers is worthy of note. Each transformer tank has fastened to the bottom of its cast-iron base two bars of iron which serve as rails. These rails each rest upon three flanged wheels, free to revolve when the transformer is pushed along over them, but not free to change their positions, since the pins upon which they revolve are held between two pieces of channel iron which are fastened down to the transformer foundations. When it is desired to take one of the transformers out of its tank the truck mentioned above is rolled along upon its track until the mounting upon it is opposite that under the transformer base. The transformer is then pushed off of its mounting on that on the truck. The truck, with its load, is then rolled to one end of the building, and under an I-beam, to which chain blocks are attached and the transformer raised from its tank. This method of handling is a convenient one, and besides being cheaper than an overhead crane, there is no danger from nor interference with the overhead wires.



POWER UNIT IN CANYON CITY ELECTRIC STATION.

The transformer foundations, instead of being solid, consist each of two brick piers. On each pier is set one of the mountings above described. The space between the piers connects, by means of a tunnel, with the outside of the building. Thus there is at all times supplied to the transformer a current of cool air which, on becoming heated, passes up through the ventilator in the roof of the building and carries with it any fumes there may be from the oil. The transformer fuse blocks are located below the transformer, between the piers above mentioned. Here they are out of the way, but easily accessible.

The transmission line extends from Canyon City to the heart of the Cripple Creek mining district, its length being 25 miles. In part it passes over rolling park land where construction is easy. On other portions of the line construction is exceedingly difficult, not only because of the amount of blasting necessary, but also on account of the difficulty of delivering material. The power line consists of three No. 3 bare copper wires arranged in a triangle, one wire being at the top of the pole. The wires are carried on glass insulators that are especially designed for the voltage at which the plant is operated. The insulator pins and cross-arms have been specially treated to preserve their insulating qualities and protect them from the weather. The two wires of a telephone circuit are carried upon bracket pins below the power wires, and by careful attention to transposition the telephone service has been made perfectly satisfactory and safe.

The poles are white cedar, the standard length being 30 ft., although

some are of necessity considerably longer. The triangle formed by the power wires is not quite an equilateral one, and for this reason the power wires are transposed twice in the length of the line. All angle poles have double cross-arms and fixtures and are substantially braced. All spans longer than the standard length (125 ft.) have double poles on each side of them, each pole having double cross-arms and fixtures.

In addition to the lightning protection at each end of the line, in the power station and receiving station, there are Wurts lightning arresters installed at four intermediate points on the line.

At present there is one receiving station at Cripple Creek; another is in course of erection. Here the current is transformed from 20,000 to 500 volts, and distribution is made at the latter voltage. The arrangement of the apparatus in the sub-station is in general similar to that in the transformer house at the power station, about the only difference being that here the circuit breakers for automatically cutting out a disabled transformer are in the low-voltage circuit, and the transformer fuses in the high-voltage circuit.

So far only hoists are being operated, though a number of motors are being installed for driving mills, pumps and compressors. They are driven by means of Westinghouse three-phase induction motors, whose speed is controlled by means of auto-converters in connection with a commutator type controller. The method of handling these hoists is as simple as that of the steam hoists which they replace, and the men who run the latter find no trouble in operating the electric hoist.

The cost of power in the Cripple Creek District when generated by steam is high, not only because of the price which must be paid for coal, but because in most cases water for the boilers must be hauled by wagon from some distance and up steep grades. In some cases the cost of water for the boilers equals that of the fuel. Power is being supplied by the Colorado Electric Power Company at a price considerably less than the cost when steam is used, especially in the case of small plants. This, in connection with the advantage of greater flexibility and ease of operation, creates a steady demand for electric power which is being filled as rapidly as motors can be obtained.

QUESTIONS AND ANSWERS.

(Queries addressed to this department should relate to matters within the special province of this periodical, such as mining, metallurgy, chemistry, geology, mineralogy, machinery, supplies, etc. As it is manifestly impossible to devote space to all the questions and notes constantly received, preference will be given to topics which seem to be of interest to others besides the inquirer. We cannot here undertake to give professional advice on problems requiring special investigation and which should be obtained from a consulting expert. Brief replies to questions will be welcomed from correspondents. While names will not be published, all inquirers should send their names and addresses. Anonymous questions will not be answered.—Editor E. & M. J.)

Tungsten Assay.—I shall be thankful if some one of your subscribers will give me a short scheme for the assay of tungsten.—A. M. A.

Answer.—We shall thank any of our readers to supply an answer to this question, beyond those methods which are described in the various text-books. A method for the analysis of ferro-tungsten was given in the "Engineering and Mining Journal," November 19th, 1898, page 607.

Tungsten.—Will you please let me know if tungsten ore has any commercial value? Are there any concerns in this country which use tungsten ore or metallic tungsten?—S. E. M.

Answer.—This question has been heretofore asked and answered in our columns. We can refer you to the "Engineering and Mining Journal," March 12th, 1898, page 316; November 12th, page 571; November 19th, 1898, page 601.

Sympathetic or Invisible Ink.—Will you give me the composition of this ink? I tried to make some with cobalt nitrate, but as it had a slight red color, it could be read before heating.—J. V. R.

Answer.—There are a number of recipes for making invisible ink. The most common is to mix equal quantities of copper sulphate and sal ammoniac and dissolve in water. Writing done with this mixture turns yellow on exposure to heat.

Fine Gold in Placers.—I want to find manufacturers of machinery for separating gold from stream sand. The gold is fine and at present I can obtain it only by panning, which is too slow work to be profitable.—W. J. G.

Answer.—There are many methods and machines in use and proposed for doing what you want to do. If you will send to any of the manufacturers of mining machinery whose cards are published in the advertising columns of the "Engineering and Mining Journal," you can obtain catalogues and descriptions of placer mining and gold-saving machinery from which you can make a selection.

Antimony Ore.—Can you give me any information with regard to antimony ore; how it is reduced? What is the ordinary commercial form? What is the current price?—R. T.

Answer.—1. The ore of antimony usually found is stibnite, or antimonite, as it is sometimes called, Sb_2S_3. It is found in many places; in the United States, in California, Nevada, Idaho, Montana and Utah. It is mined at present only in California and, to a small extent, in Utah.

2. To describe the methods of reducing antimony ore would occupy too much space in this column. You will find a full account of the metallurgy of this metal in "The Mineral Industry," Volume I., page 22.

3. Antimony is usually sold in cakes or ingots, known under the commercial name of regulus. There are several well-known brands on the market. Those best known are "U. S. Star," which is an American brand; Hallett's and Cookson's, both English makes; and a Japanese antimony.

4. Quotations for antimony are given in the "Engineering and Mining Journal" each week. The price at present ranges from 8¾ to 9¼ cents a pound, according to make.

Kaolin.—1. What should kaolin (or china clay) contain or not contain to make it suitable for use in paper making? Is clay used in making wall paper?

2. Can clay containing more than 50 per cent. white sand be used, if the sand is washed out?

3. Can clay of a slight creamy tint be used in paper making of any kind?

4. Can kaolin containing 60 per cent. white sand be used for fire-clay, or refractory work?

5. Is there any easy, non-expert method of testing samples of clay to determine approximately their adaptability for paper or fire-brick? In other words, a kind of clay prospector's guide, which will avoid the use of expensive analyses.—B. T. H.

Answer.—1. For use in paper making, purity and uniformity of color are the chief requisites. The clay should be free from sand and from iron oxide, etc., which are frequently found in it. Clay is largely used in making wall paper, as well as in other kinds of paper.

2. Clay for making paper must usually be washed. If the sand mixed with it can be washed out there is no reason why the clay cannot be used in making paper, provided it has the requisite qualities.

3. White color is usually a requisite for paper clay; but for some kinds of paper the creamy tint might not be an objection. Your best plan would be to submit samples to one or more paper makers.

4. The only way to determine the adaptability of any clay, or mixture of clay and sand, for fire-brick, is by actual test, or analysis.

5. There is no absolutely correct or approximately correct guide to determine off-hand the value of clays for either purpose you mention, though long experience in handling will be of much assistance. We would advise you to consult the article on "Clay," by Mr. Heinrich Ries, in "The Mineral Industry," Volume II.; and that on "Refractory Clays and Fire-brick," by Mr. Charles Ferry, in "The Mineral Industry," Volume IV.

COAL IN PRUSSIA.—The production of coal in Prussia for the nine months ending September 30th is officially reported as follows, in metric tons:

	1897.	1898.
Coal	61,925,855	65,967,917
Brown coal (lignite)	17,230,336	18,554,436
Totals	79,156,191	84,522,353

There were this year 268 colleries producing coal in operation, and 374 open-cut workings or mines producing lignite.

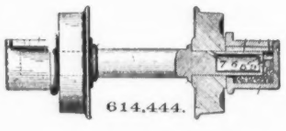
PATENTS RELATING TO MINING AND METALLURGY.

UNITED STATES.

The following is a list of the potents relating to mining and metallurgy and kindred subjects issued by the United States Patent Office. A copy of the specifications of any of these will be mailed by the Scientific Publishing Company upon receipt of 25 cents.

Week ending November 22d, 1898.

614,444. MINE CAR AXLE. Anthony Conwell, Ziba H. Tinklepaugh and Philip Sheridan, Peckville, Pa. The combination of an axle provided with a spindle having a hollow outer portion terminating short of the inner end of the spindle, the latter being provided with a perforation extending from its outer face to its interior, a head fitting in the outer end of the spindle and provided with a perforation, an axle-box receiving the outer portion of the journal, and a wheel arranged on the inner portion of the journal and located over the said perforation.



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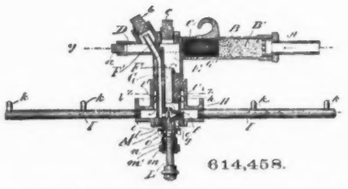

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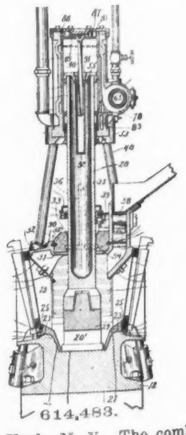


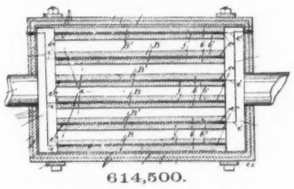
614,483.

614,458. RETORT BURNER. Moses F. Gale, New York, N. Y. The combination with the retort carrying gas and air passages and the central commingling tube, of the chamber located above the commingling tube, extending up through the retort, but not communicating therewith, and the channels for combined air and gas leading from the bottom of the chamber.

614,483. STAMP MILL. Allan G. Mather and Frederick T. Snyder, Milwaukee, Wis. The combination of a stamp-box, a top piece having an opening and a vertical flange surrounding the opening, the lower edge of the flange formed with in inwardly-extending horizontal flange, a housing seated on the horizontal flange of the top piece, horizontal wedge-keys fitting in registering recesses in the vertical flange of the top piece and in the housing, and a stamp steam passing through an opening of the housing.

614,450. FLUID FUEL OR OIL BURNER. Jane A. Elkins, administratrix of Ira S. Elkins, deceased. A liquid-hydrocarbon burner, consisting of a single tube formed with arms vertically disposed and connecting at the top, and an arm closed at the end and extending horizontally from the lower end and having an upwardly-directed aperture, in combination with a button.

614,500. OZONIZING APPARATUS. Alexander S. Ramage, Cleveland, Ohio, Assignor to Joseph Black, same place. The combination with an insulating casing of two or more discharge plates, having air spaces between which communicate with common inlet and outlet air



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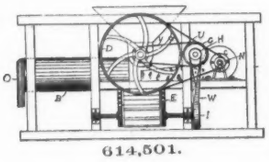


614,501.

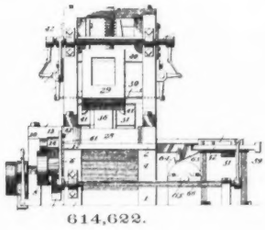
chambers at each end of said casing, the discharge plate consisting of a corrugated metallic sheet hermetically sealed between insulating plates and connected with a suitable source of electrical energy, and air inlet and outlet pipes communicating with the respective common chambers.

614,501. PNEUMATIC CONCENTRATOR. Arthellow M. Randolph, Elgin, Ill. Assignor of one-third to Daniel Pool, St. Paul, Minn. The combination with the hopper, provided with a suitable outlet, and the blower arranged adjacent to said outlet, of the open-end stationary cylinder, arranged opposite said blower, the flannel or similar lining detachably secured within the cylinder adapted to catch and hold the dust being carried through the receiver by the current of air.

614,536. INCANDESCENT HYDROCARBON BURNER. Philip B. Curran, Philadelphia, Pa. A casing with a vaporizing chamber at the upper end thereof, a mixing chamber at one side of the casing, a distributing chamber above the mixing chamber, in communication therewith a burner on the distributing chamber, and a deflector in the latter.

614,539. SECONDARY BATTERY. Nathan H. Edgerton, Philadelphia, Pa. A series or pile of pans placed substantially parallel with each other, each pan being formed of two dissimilar metallic electrodes in contact forming a couple, one side of each pan being an oxidizable metal, and the other side thereof having adjacent thereto an active material capable of further oxidation, the similar faces of said pans facing in the same direction, and a moisture-absorbing material placed between the adjacent sides of neighboring pans for holding the electrolyte.

614,572. METHOD OF AND APPARATUS FOR TREATING ORES. Joseph G. McNulty, New York, N. Y. In apparatus for electrolytic treatment of ores, a tank or vat provided with an inlet and outlet, at substantially different levels, whereby the pulp must flow from one



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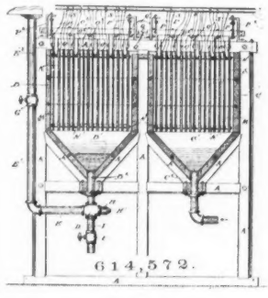


614,572.

level to another in passing through the vat, adjacent electrode plates of opposite polarity suspended in the vat and the pulp and connected with a source of electric energy, and means for vibrating the electrodes in a direction at right angles to their planes.

614,622. MACHINE FOR MAKING BILLETS. Enoch D. Phillips, Toledo, Ohio. The combination of a support for the bloom from which the billet is to be formed, a hammer arranged over the support and adapted to strike the bloom held thereon, means for moving the bloom beneath the hammer, an end hammer arranged to strike the end of the billet held on the support beneath the first-named hammer, a spring to actuate the end hammer, and mechanism for placing the spring under tension.

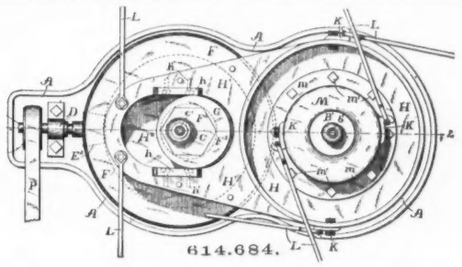
614,608. DYNAMO-ELECTRIC MACHINE OR ELECTROMOTOR. Eugène Cantono, Pavie, Italy. A dynamo-electric machine constructed with the fixed and rotative members of its magnetic field movable toward or from each other to vary the air space, and with an elastic medium tending to widen the air space with the field excitation.

614,617. ART OF PURIFYING LIQUIDS. Robert E. Milligan, New York, N. Y., Assignor to Henry B. Anderson, same place. An improvement in the art of purifying water which consists in (1) introducing into the water a dilute solution of sulphuric acid, and (2) passing the water through a filter bed composed of hard carbon and a metal which is electropositive to the carbon.

614,633. ELECTROLYTIC APPARATUS. Friedrich A. Thum, Newark, N. J. An element of an electrolytic series plant, consisting of a non-conducting frame adapted to hold the material to be treated, the frame being closed at one side by a removable plate conducting material, and at the opposite side by a non-conducting foraminous material, such as muslin.

614,655. BRICK, TILE, BUILDING BLOCK, &c. Harry F. Ingerson, Alameda, Cal., Assignor of one-half to Clarence F. Briggs, San Francisco, Cal. A brick consisting of a non-vitreous, vitreous or semi-vitreous clinkers and a binding agent.

614,684. PUMPING RIGGING FOR OIL WELLS. William Wright, Franklin, Pa. The combination with a bed plate and a vertical pull-wheel shaft or pedestal and a vertical eccentric shaft mounted thereon, a pull-wheel journaled on the former shaft, and provided with a laterally-extending arm recessed as shown, a gear-wheel journaled on the latter shaft, and provided with an eccentric bulb having its upper portion in the form of a regular polygon, a detachable cam



614,684.

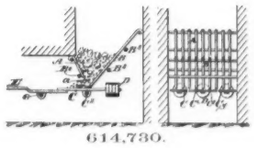
adapted to slip over said polygon and to be held thereon, and to engage in said recess in the arm of the pull-wheel, with means for driving said pull-wheel.

614,690. MACHINE FOR MAKING BRICKS, TILES, &c. John Berry, Nottingham, England. The combination with a pug-mill shaft square in cross section, of adjustable blades having threaded shanks passing through holes in the shaft and provided with shoulders resting against the square sides of the shaft, and nuts screwed over the threaded ends of the shanks for securing the blades in their adjusted positions.

614,759. GALVANIC BATTERY. Charles T. Richmond, Cleveland, Ohio, Assignor to the National Carbon Company, same place. The combination of a jar, and a cover made of insulating material, and having an integral threaded boss on its under side and a hole through the boss and cover, with a clay porous cup internally threaded at its open upper end, which cup is screwed on to the boss, a carbon electrode in the cup, having a stem which extends up through the hole, and a zinc electrode having a stem which projects through a hole in the cover, and is supported by said cover, and depolarizing material in said clay cup.

614,764. CONTINUOUS CENTRIFUGAL SEPARATOR. Herman de Vries, Robdé, Amsterdam, Netherlands. In combination; a fixed outer casing provided with upper and lower gutters; a rotating conical basket, open at top and bottom and placed with its larger end lowermost; and an open-bottomed rotating cylindrical basket, open at top and bottom, forming a prolongation of the conical basket downward and carried from the same spindle.

614,730. CEMENT KILN. Albert Lavocat and Edouard Candlot, Paris, France. The combination with grate bars, arranged to converge downward, and having an opening between their lower ends, of a plurality of plates mounted on a pivotal support beneath the open-



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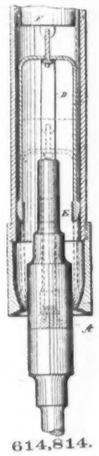

614,814.

ing, a lever having one end lying underneath the ends of said plates, to normally maintain them in a horizontal position and counterbalancing weights to restore said plates to their normal position.

614,814. DEVICE FOR REMOVING DRILLING TOOLS FROM WELLS. Frank M. Kiser, Parkersburg, W. Va., Assignor to William H. Kesselman, same place. A device, comprising a bowl or ferrule secured to the bottom of the casing and having its inner surface coned or slightly reduced in diameter at its lower end, said conical surface extending entirely about the end of the bowl, and a gripping device consisting of toothed dogs movable freely within the casing and unconnected thereto whereby when the bowl has been lowered over the tools the dogs may be lowered within the casing and forced between the bowl and tools.

GREAT BRITAIN.

The following is a list of patents published by the British Patent Office on subjects connected with mining and metallurgy:

Week Ending October 22d, 1898.

25,092 of 1897. MINER'S LAMP. W. Akroyd and W. Best, Morley, Yorkshire. In miner's safety lamps arrangements for preventing them being locked unless the gauze is in the proper position.

27,063 of 1897. CONCENTRATOR. Manhattan Concentrator Company, Atlanta, Ga., U. S. A. An upward continuous current flow for concentrating.

28,919 of 1897. COAL CUTTER. C. O. Palmer, Cleveland, Ohio, U. S. A. In coal cutters improvements in method of mounting the cutter and the motor.

5,943 of 1898. SULPHIDE ORE TREATMENT. S. Cowper Coles, London. Wet process for treating zinc lead sulphides.

11,785 of 1898. ROCK DRILL. J. G. Leyner, Denver, Colorado, U. S. A. In rock drills devices for expelling the ground-out rock.

15,430 of 1898. ELECTROLYTIC DIAPHRAGM. E. Langguth, Aachen, Germany. Improved diaphragms for cells for electrolysis of salt.

Week Ending October 29th, 1898.

2,458 of 1898. ROCK DRILL. T. Hill and W. Partridge, Stafford. Improved form of hand rock drill for boring in coal.

11,604 of 1898. ELECTRIC FURNACE. E. Stassano, Rome, Italy. Electric furnace for producing chromium, tungsten, nickel and manganese steel.

PERSONAL.

Mr. F. M. Meredith, of Butte, Montana, is in San Francisco.

Mr. George Arthur Rice, Colorado mine owner, is in San Francisco.

Mr. A. G. Wissel, claim owner on El Dorado Creek, near Dawson City, is in San Francisco.

Mr. W. F. Patrick, former owner of the famous Aftermath Mine, of Colorado, is in San Francisco.

Mr. John M. Maxwell, mining engineer, of Leadville, Colo., will remain in San Francisco some weeks.

Mr. H. A. Keller, consulting mining engineer, is in San Francisco, where he will establish a branch office.

Mr. Lawrence Harris, general manager of the Revenue Mine, at Norris, Mont., is on a visit to San Francisco.

Mr. Frank Swindler was in Denver, Colo., last week. He has taken charge of a gold proposition near Phœnix, Ariz.

Mr. Charles del Boca, who represents a Paris syndicate, is inspecting the mining properties about Cripple Creek, Colo.

Mr. W. B. Pless, the inventor of a dredger, has returned to San Francisco from British Columbia, after an absence of two years.

Mr. R. D. Grant, manager of the Parrot properties, at Butte, Mont., has returned from a visit to New York and Connecticut.

Mr. A. T. Hathaway, operating a mining property in San Miguel County, Colo., has returned from a trip of several weeks in the East.

Messrs. James F. Meagher, G. M. Gunderson and John Ritchie, of Chicago, interested in California mining properties, are in San Francisco.

Mr. A. P. Brayton, Jr., of the Pelton Water Wheel Company, of San Francisco, has returned from an extended tour of Japan, in the interests of his company.

Mr. C. Nigel Stewart, of London, Eng., representing an English mining syndicate, accompanied by Mr. James Edwards, of New York, has arrived in San Francisco.

Mr. E. E. Chase, of Chase & Rank, of Denver, Colo., is examining a big mine in Topio, Durango, Mexico. He goes in the interests of members of the Standard Oil Company.

Messrs. C. H. Merrill, Dan C. Woodcock and Schuyler S. Moore, of Troy, N. Y., have gone to Fort Thomas, Ariz., to inspect the Spenazuma mine and mill in the Graham Mountains.

Mr. T. C. Yen, who represents a Chinese syndicate that contemplates erecting a large flour mill near Shanghai, recently visited the E. P. Allis Company's works at Milwaukee, Wis.

Mr. Edward Lambetti, of Genoa, representing an Italian steel company, was in Pittsburg, Pa., last week to purchase old steel rails and scrap for export to Italy, where the old rails are to be re-rolled. Mr. Lambetti is greatly interested in the McKenna process for re-rolling old steel rails, as practiced in this country.

Messrs. A. Dutrex, P. Mossot, T. Ballryder and F. Laurmann, who represent the great iron works of Mont Lucon, France, are touring the United States inspecting the American methods of manufacturing steel and iron. They have inspected the Federal Steel Company's plants at Joliet, Ill., and Lorain, O.

Mr. J. H. Jennings, a graduate of the Lawrence Scientific School at Harvard University, now a successful mining engineer in the gold district of South Africa, has given to Harvard $10,000, the interest of which is to be given to a student in the Lawrence Scientific School, preferably a student of mining engineering. The first award of this scholarship of $400 has been made.

OBITUARY.

Thomas Spence, of Comly, O., superintendent of the New Hamburg Coal Company, died November 1st, at the age of 56 years.

James McGee, president of the New York Produce Exchange, was found dead in bed at his home in Washington Park, Plainfield, N. J., on December 6th. He was an officer of the Standard Oil Company.

James G. Lindsey, superintendent of the Newark Lime and Cement Manufacturing Company, died at his home, in Kingston, N. Y., December 5th, aged 80 years. He was an able geologist, and an authority on the cement-bearing rocks of New York.

John C. Lynch, one of Utah's pioneer mining men, died in Salt Lake City November 21st. He was born in Newport, R. I. He went to Montana in the early 60's, and was one of the original discoverers of Alder Gulch in 1862. In 1870 he went to Nevada and settled in Pioche. Since then he had been engaged in mining and stock raising in that section. He was, at his death, one of the owners of the Ophir, at Stateline. He formerly owned the Horn Silver Mine, which he sold to Matt Cullen and Allen G. Campbell. He leaves three sons.

Sir John Fowler, the distinguished English civil engineer, died at Bournemouth, Eng., November 20th. He was born near Sheffield in 1817, and when 17 years old was apprenticed to a hydraulic engineer. At the age of 26 he had become locomotive superintendent and manager of the Stockton and Hartlepool Railway. He became a consulting engineer, and his wonderful energy enabled him to carry through many projects. Among these were the original "underground" or Metropolitan Railway; the first railway to bridge the Thames at London, and a number of other railway lines in England. He also made an expert report on the railway system of India. His most prominent work, however, was the construction, in partnership with Sir Benjamin Baker, of the great Firth bridge. This work was completed in 1890, when he was 73 years old, and brought him his title.

SOCIETIES AND TECHNICAL SCHOOLS.

Michigan School of Mines.—As the result of a lack of harmony on certain points with the directors of this school, Dr. M. E. Wadsworth tendered his resignation on November 29th, asking that his resignation take effect May 15th, 1899, and that leave of absence be granted him from the end of the present term, on December 15th. The requests were granted. In his letter of resignation, Dr. Wadsworth said that when he took charge of the school, in 1887, the school had no real organization or definite course of study, and no school buildings. Its equipment was valued at only a few thousand dollars, and it had three instructors and a janitor. Now there is a complete system of instruction, three large and three small school buildings, valuable collections, and well-equipped laboratories, and a staff of nearly 30 professors, instructors and other employees, while the property is valued at $253,000. The school that at first had no hold anywhere, has now made a wide reputation for itself, and ranks high among the mining schools of recognized merit.

INDUSTRIAL NOTES.

The Otto Gas Engine Works, Philadelphia, Pa., received the gold medal award for gasoline engines at the Omaha Exposition.

Among recent shipments by the United States Radiator Works, at West Newton, Pa., were two carloads of radiators to Norway, three to China, and one to Japan.

The firm of H. K. Porter & Company, Pittsburg, Pa., builders of light locomotives, has had a 90 H. P. Westinghouse gas engine installed at its Pittsburg works.

The firm of W. G. Nagel & Company has been organized for the purpose of conducting a general business in electrical machinery, supplies and construction, in Toledo, O.

The Pittsburg Reduction Company expects to have its new 14-in. roughing train, 10-in. finishing train and 28x84-in. sheet mill in operation at its Kensington, Pa., works before long.

T. M. Defrees, of Indianapolis, Ind., patentee of a gas engine, contemplates building engines varying in capacity from 1 to 100 H. P. The engine is said to be entirely different from any yet built.

The Riverside Chemical Manufacturing Company, of Detroit, Mich., has filed articles of association. The capital is $5,000. The stockholders are Henry L. Page, James A. Coe, Harry B. Page and Louis J. Bureau.

The English firm of Vickers Sons & Maxim has, it is said, acquired an interest in the Newport News Shipbuilding and Dry Dock Company of Newport News, Va., and will establish a plant for the manufacture of cannon and rapid-fire guns.

The Brown Hoisting and Conveying Company, through its New York office, has closed a contract with the Bethlehem Iron Works for coal and ore storage plants. There will be a plant of 50,000 tons capacity for the storing of coal and a 100,000 ton plant for storing ore.

The stock of the Hartford Chemical Company has been purchased by New Britain, Conn., capitalists, and the business will be moved to that city. The New Britain men, who are interested in the deal, are: H. T. Walker, C. B. Stanley, F. H. Ilvord, G. W. Andrew and W. E. Hine.

The Edward P. Allis Company, of Milwaukee, Wis., has received orders for 3 more 6,000 H. P. vertical compound engines for the 96th St. Station of the Metropolitan Street Railway Company, New York City. The order from the Metropolitan Company now comprises 11 of these engines.

The Battle Creek Steam Pump Company, Battle Creek, Mich., though it has increased the output of its plant during the past year, now has orders in hand enough to run the factory until February 1st. About half of the output is exported. The company was awarded the gold metal at the Omaha Exposition.

The Berlin Iron Bridge Company, of East Berlin, Conn., is erecting for the town of Whitehall, Washington County, N. Y., a riveted girder bridge having a span of about 70 ft. The bridge is of latticed girder type, with steel floor beams, and of a design to carry, besides ordinary traffic, the weight of a steel road roller.

The Westinghouse, Church & Kerr Company, of New York, has been given an order for 8 automatic stoking machines to be installed at the works of the A. & P. Roberts Company, Pencoyd, Pa. This is the fourth order that this company has given to Westinghouse, Church & Kerr, making 38 machines in all. The stokers will care for 4,000 boiler H. P. The Westinghouse, Church & Kerr Company has also had an order for a 200 H. P. engine direct connected to a 120 kw. generator from the Ramapo Iron Works, Hillburn, N. Y., besides an order for a 300 H. P. engine direct connected to a 200 kw. generator from the Baldwin Locomotive Works.

The Ohio Iron & Steel Company has started its Mary Furnace, at Lowellville, O., after a shut-down of four months. The furnace now has an entire new shell, including foundations, which was lined up 12 x 18 x 85. The pipe fitting was furnished by Best, Fox & Company, of Pittsburg, the iron construction by the Mechan Boiler and Construction Company of Lowellville, O. The concern put in an entire new system of three trestles, each 600 ft. long, equipped with 40 filling bins, which hold 200 tons of ore each, and a coke bin 1,500 tons of coke. The stock house was constructed and a new hoisting tower built, equipped with Crane steel cages, 9 ft. square. Four hundred horse-power water tube boilers were added. The casting house is equipped with a complete set of chills for making Bessemer and basic iron. A fourth Kennedy-Cowper stove, 18 ft. x 20 ft., is in process of construction. The furnace is expected to turn out 400 tons of iron daily.

The Meyer-Clarke-Rowe Mines Company has been organized to examine and report on mines and kindred undertakings in the United States, Canada and Mexico; to examine and, if possible, verify titles to mineral and other properties, and to aid in securing capital for deserving mining enterprises. Since mining is an industry too often given over to gambling, any company that seeks to make mines legitimate investments is to be commended. The present organization is composed of men who have had unexcelled opportunities for judging of the value of Western mining enterprises, and whose responsibility and high reputation are well known. The officers are: President, W. B. Clarke, president of the United States Trust Company of Kansas City, Mo.; vice-president, A. R. Meyer, president of the Consolidated Kansas City, who has been connected with Western mining undertakings for 25 years; secretary and treasurer, B. D. Rowe, known to many persons as a successful investor of capital in Western mines; engineer, H. W. Hardinger, who has had 20 years' experience as a mining engineer in the Rocky Mountain States. The offices of the company are at Kansas City, Mo.

We believe this company offers through the special knowledge and high reputation of its officers very great facilities and advantages to those who wish to get reliable information concerning mining property or who seek capital for its development.

TRADE CATALOGUES.

The Hyatt Roller Bearing Company of New York has issued a neatly printed and illustrated catalogue describing the bearing that it manufactures.

"Bristol's Patent Steel Belt Lacing" is described in a circular issued by the Bristol Company, of Waterbury, Conn. The samples of the lacing sent with the circular tend to substantiate the claims made by the company for the convenience, strength and general handiness of the device.

The Armstrong Manufacturing Company of Bridgeport, Conn., that has a branch office at 109 Centre St., New York, issues a complete catalogue of water, gas and steam fitters' tools, including stocks and dies, pipe threading and cutting-off machines, vises and clamps. The dies are made in parts, are interchangeable and, it is claimed, can be readily sharpened.

The American Octopus Company, New York, is sole agent for the United States of the "Octopus" anti-incrustator, a device that has received numerous testimonials in England as a preventa-

tive of scale in boilers. A catalogue describes this simple device. Its action is largely mechanical, collecting, it is said, the "fur," which otherwise would be deposited in the boiler, and the catalogue recommends it to all users of hard water. H. D. Cuppen, general manager of the Jackson Drill Company, Denver, Colo., is president of the American company.

The "New York Jeweler" is the title of the very attractive catalogue for 1899, issued by the jewelry firm of S. F. Myers' Company, Maiden Lane and Liberty St., New York. The catalogue is a volume of 757 large pages profusely illustrated, and at this season of the year it will interest any one. Many of the illustrations are colored. Besides a very complete line of watches, clocks, jewelry, silverware, etc., the book contains descriptive lists of optical goods, including magnifying glasses, field glasses and telescopes, also thermometers, aneroid barometers, compasses, surveying instruments, cameras and photographic supplies and drawing instruments. As a book for reference it should be of especial interest to all mine store keepers. The S. F. Myers' Company is one of the largest jewelry concerns in New York and offers liberal discounts from the list prices named in the catalogue.

MACHINERY AND SUPPLIES WANTED.

If any one wanting machinery or supplies of any kind will notify the "Engineering and Mining Journal" what he needs he will be put in communication with the best manufacturers of the same.

We also offer our services to foreign correspondents who desire to purchase American goods, and shall be pleased to furnish them information concerning goods of any kind and forward them catalogues and discounts of manufacturers in each line.

All these services are rendered gratuitously in the interest of our subscribers and advertisers; the proprietors of the "Engineering and Mining Journal" are not brokers or exporters, nor have they any pecuniary interest in buying and selling goods of any kind.

GENERAL MINING NEWS.

ALABAMA

Calhoun County.

Copper Discovery.—E. D. McClellan reports finding several veins of copper ore 15 miles southeast of Piedmont. Not enough work has been done to determine the extent of the veins and their average value.

ALASKA.

Berners Bay.

Comet.—This mine belongs to the Berners Bay Company. Work progresses from the 1,000-ft. tunnel where in upraises a 6 ft. ore body is reported opened.

Kensington.—The ore body which is worked by an open pit is said to be 80 ft. thick. A 1¼ in. cable tramway leads to the Bear gravity railroad.

Cook's Inlet.

According to the Alaska "Mining Record," mining during the past season, when conducted by those who were really miners, has been rewarded with a very fair remuneration, though no great discoveries have been made. The great majority, however, of those spending the season in that section were men of no practical experience in gold seeking, and were sadly disappointed because they found no Klondike awaiting them, and scarcely moved from the bench during their stay. Excessive water in the creeks also hampered the operations of the real miners and prospectors, and many became discouraged from this reason. As to the coal beds, the development done has been upon the surface only. The coal thus uncovered is weather-beaten, deficient in essential qualities and of small value. In certain places, however, are reefs beneath the mean level of the sea, uncovered only at extremely low tides, which furnish an excellent article of steam coal. In fact, the only fuel used by some exploring steamers during the summer was secured from these submerged reefs. It proved satisfactory, though the coal gathered from the surface or from the workings which are but a few feet below it is a poor article.

Douglas Island.

Alaska Mexican Gold Mining Company.—This company reports for October a total of 13,408 tons of ore mined and milled, the yield in bullion being $25,929, or $1.93 a ton. The working expenses were $20,361, or $1.52 a ton; leaving a profit of $5,568, or $0.41 a ton for the month.

CALIFORNIA.

Amador County.

(From Our Special Correspondent.)

Amador Queen.—At this mine, 2 miles south of Jackson, drifting has been commenced from the 1,100-ft. station, to prospect the main ledge.

Kennedy.—As soon as the new shaft at this mine, near Jackson, is well under way, a hoist will be put in and a new mill erected.

Butte County.

(From Our Special Correspondent.)

The banks of the Feather River, in this county, are being worked with dredgers for many miles.

Calaveras County.

(From Our Special Correspondent.)

Lamphyre.—Work has been resumed at this mine, ¾ mile northwest of Comanche, and a contract has been made with the Harris mill people to work the ore.

Kern County.

Stamp Mills.—There are reported to be 109 stamps dropping in the Randsburg district, at the following places: Cuddaback, 10; Johannesburg, 10; Koehn's Springs, 10; Garlock, 45; Randsburg, 4, and Barstow, 30 stamps.

Nevada County.

Pennsylvania Mining Company.—At the annual meeting in Grass Valley the following directors were elected: John M. Thomas, Edward Fitzsimmons, F. Zeitler, D. E. Matteson and T. H. Wilhelm. They organized by electing T. H. Wilhelm, president; D. E. Matteson, vice-president; F. J. Thomas, secretary, and the Citizens' Bank, treasurer. Bennett Opie, the present superintendent, was reappointed. The material for the new 10-stamp mill is on the ground.

Placer County.

(From Our Special Correspondent.)

Gold Run Mining and Ditch Company.—This company, which owns 7 miles of the channel between Dutch Flat and the American River, has extended the old tunnel 600 ft., and struck a rich gravel deposit. The gravel is cemented and will require milling.

Plumas County.

The restraining dam on Rabbit Creek, near La Porte, has been completed. This dam is 40 ft. high and 200 ft. long, from bank to bank.

At the Rocky Bar, on Middle Feather, 3 miles below the mouth of Nelson Creek, a 500-ft. tunnel has been run to develop the gravel channel.

Riverside County.

(From Our Special Correspondent.)

Iron Chief.—This gold quartz mine, 45 miles northeast of Walters, in the Eagle Mountains, has been successfully developed by the present owners, from a prospect. The vein trends east and west, and dips north; the ore is hematite. The main incline is now 150 ft. deep. In the lower levels the ore is from 4 to 12 ft. wide, and assays from $10 to $100 per ton. A 25 H. P. gasoline engine does the hoisting, and another 25 H. P. gasoline engine drives the mill plant, a dry roller and cyanide process. A 10-mile pipe line supplies the plant and the camp with water from Cottonwood Springs. About 60 tons of ore are reduced per day.

San Bernardino County.

(From Our Special Correspondent.)

Morongo.—At this mine, northeast of Victor, at an elevation of 7,200 ft., a cyanide plant is being put in, and the ore will be worked by this process in the future.

Santa Barbara County.

(From Our Special Correspondent.)

On Summerland Beach a flow of natural gas was struck in an oil well at a depth of 300 ft. Mr. S. W. Knapp, the owner of the well, is making arrangements to control the supply.

San Diego County.

(From Our Special Correspondent.)

Bay Horse.—At this mine, in the Mesquite District, the pipe line and a 20-stamp mill are nearing completion, with plenty of ore on the dump. The shaft is down 165 ft., and the ore is said to run from $10 to $100 per ton.

Shasta County.

(From Our Special Correspondent.)

Crown Point.—This claim, together with the Ophir, Young America and Big Emma, all situated in the Flat Creek Mining District, have been purchased by the Iron Mountain Investment Company.

Gypsy Queen.—This mine, west of Redding, near the Deakin & Taylor Mine, is being worked by British Columbia people, who intend to prospect to a considerable depth.

St. Luis Obispo County.

(From Our Special Correspondent.)

San Luis Obispo Bituminous Rock Company.—This company has been incorporated with a capital stock of $1,000,000, all subscribed. Incorporators: G. B. Nichols, F. Adams, A. Walker, J. A. Fairchild, J. F. Crank, I. W. Hellman, W. J. Broderick, G. A. Dobinson, L. M. Kords and E. F. Spence. This company intends to deal in the San Luis Obispo bituminous lime rock.

Trinity County.

(From Our Special Correspondent.)

Mountain Boomer.—This old property, at New River, supposed to have been worked out years ago, is now being worked by San Francisco and Red Bluff parties. The old works have been reopened to a depth of 240 ft., and a new tunnel is being run several hundred feet below the old one. A vein is reported to have been encountered in an upraise.

Tuolumne County.

(From Our Special Correspondent.)

Alameda.—The 20-stamp mill on this property, ½ mile north of Rawhide Mine, has been completed, and the mine has just been inspected by the president, J. F. Meagher, and other stockholders from Chicago.

Bonanza.—This mine, at Sonora, has been allowed to fill with water, and the mill has shut down. Although the mine is well equipped with a steam plant, the management has decided that it will be economy to wait until sufficient water can be secured to furnish power. The mine can be pumped out in about 10 days.

Booker Ranch.—On this property, near Sonora, the two-compartment shaft now down 60 ft. is sinking rapidly. The vein will probably be cut at a depth of 100 ft.

Hope.—This mine, on the Bonanza lead, ½ mile east of Sonora, is again running with a full force of men. Some very fine ore has been taken out during the past few days.

COLORADO.

Boulder County.

Clinton Mining and Milling Company.—Thomas R. Mann has sold to this company, composed of Pennsylvania capitalists, who are also interested in the Colorado & Northwestern Railroad, the Logan, Quincy, Teller and New Revenue lodes, for a reported price of $25,000. The Logan was once a famous producer.

Delano Mill.—The Venture Company of England has finally completed the purchase of this mill at Boulder. The plant originally cost over $50,000. It is now treating 35 tons of ore daily from the Kekionga Mine at Magnolia, and the Sunshine and other mines at Sunshine.

Forest Mining and Milling Company.—This Denver company has started up the Boyd Mill, near Boulder.

July Bird.—Henry Wild, Henry Riniker and Robert Hadnauer of Edwardsville, Ill., have given a lease and bond for this claim, near Gold Hill, from David Evans of Summerville.

Mogul Tunnel.—In this tunnel a vein 5 ft. wide and of good value, belonging to the Protection group, has been cut 742 ft. from the mouth of the tunnel at a depth of 600 ft.

Chaffee County.

Iron Chest.—H. Joseph Holbschneide has leased this mine at St. Elmo, and recently shipped two carloads of $20 ore.

(From Our Special Correspondent.)

Belle of Granite.—This old-time gold producer will, it is said, change hands soon, as a well-known syndicate is about to take up its option.

Custer County.

Bassick Gold Mines Company.—This is the name of the company that is to work the Bassick Mine at Rosita. Capitalization, $1,000,000 in $1 shares. Officers and incorporators: President, Hugh Butler, Denver, Colo.; first vice-president, T. W. Williams, Newark, N. J.; secretary and treasurer, Edgar W. Bassick, Bridgeport, Conn. The company is incorporated under the laws of New Jersey, with an office in Jersey City.

El Paso County—Cripple Creek.

(From Our Special Correspondent.)

October Output.—The output for October amounted to 33,990 tons of ore of the total value of $1,229,831. Of this 9,192 tons of the value of about $65 per ton, making $597,482, were sent to the smelters; 24,798 tons, of the value of $25.50 per ton, making $632,349, were treated by the chemical mills. The output for October shows an increase over that of September, though it does not quite come up with that of August, the banner month of the year. Present indications are that November will be a very good month. The dividends paid by the principal public stock companies are as follows: Portland, $60,000; Elkton, $20,000; Gold Coin, $10,000; Vindicator, $50,000; Anchoria-Leland, $6,000; total, $146,000. There are also a number of dividend paying properties owned by close corporations and private individuals, such as the Modoc, Golden Cycle, Strong, Independence, Last Dollar and others. The Vindicator dividend is a quarterly one.

Bolivia.—It is reported that this mine, which has been worked by the Dorcas Company, under bond and lease, has closed down. The reason is not known. The property is situated near Gillette, north of Cripple Creek, in a locality that has had no paying mines. A large amount of work has been done on the property, and a short time ago a number of very favorable reports were circulated about it.

Gold Coin Mining & Leasing Company.—The output of this property for November was 2,943 tons. There are a number of tons not yet settled for, so the average value cannot be given. The ore for October averaged $40 per ton. The mine is in very good condition. The ore was

taken from the 3rd, 4th and 5th levels. H. E. Woods, of Victor, is in charge of the mine.

Mary McKinney Mining Company.—The Birch lease has suspended operations and the pumps are pulled. The lease was nearly up and there was no time to do further development work. A large amount of gold ore has been taken out. The company will take hold of the property shortly after the first of the year, when the other principal lease expires. The Birch lease, of which James E. Birch is general manager, has been worked by the Jersey Leasing Company. It is understood that this company will operate in another part of the district.

Squaw Mountain Tunnel.—An injunction and damage suit has been filed against this company by the Pappoose Gold Mining Company and others. It is understood that the trouble is that the tunnel people have extracted ore from a vein that is supposed to apex on the Guess, a claim owned by the Pappose Company, and worked under lease by Griswold and others.

Lake County.

(From Our Special Correspondent.)

One of the heaviest snowfalls that has visited this camp in 10 years came this week, and caught many properties unprepared. As a result, a number of mines, including the Resurrection, were forced to suspend shipments for a few days, but the roads have been cleared in most cases and shipments resumed.

Ballard.—This property, on Breece Hill, near the Ibex, will be sold this week. The leasers, Alderman Golob, Peter Turnbull and others, had a bond on the property, and since the recent strike have deposited $10,000 in the bank to take up the bond. The Ballard leasers worked for many months without results, but hung to the proposition, and now ship about 25 tons a day of gold ore.

Big Six Mining Company.—The old Van Camp lease having expired, the mine has not been doing anything for the past few weeks. It is understood that Mr. A. L. Englebach will secure the lease and will work this old-time property on a large scale, the first work being a new shaft over 500 ft. deep, to open up the lower contact. During the past year E. J. Van Camp and others, on the Nettie Morgan claim, have shipped steadily small quantities of ore, but have made little money.

Bimetallic.—This mine and the B. & M., in the Low Pass District, have been leased to New York parties, who will work them next year.

Downtown Mines.—Pumping on the Bon Air, Penrose and Bohn, of the downtown mines, is going ahead steadily. A contract has been let for the extension of a steam air line to the Starr shaft, so that soon that property will be helping.

Hayden Placer.—It is said on good authority that this placer has been leased, and that next spring a fine plant will be built to work it.

Wolftone.—The lease for the coming year will be let by the owners in Denver next month. A number of well-known Leadville men are trying for it. The bids will be opened the first week in January. The present lessees have done well on the 600-ft. levels for some time, and are taking out fine sulphide and carbonate ore. It is expected that conditions of the new lease will mean pumping out the water and developing the rich ore body known to exist in the drowned workings.

Ouray County.

(From Our Special Correspondent.)

Beaumont Sampling Works.—J. L. Murphy and D. B. Hagerty have secured possession of this mill, and will do custom work. The capacity is 20 tons, and contracts have been closed for 5 tons daily from several Red Mountain properties.

Camp Bird Mines and Mills Company.—This company has completed and put in operation a cable tramway 2½ miles long in just 39 days. It was constructed by the Trenton, N. J., Iron Works, under the personal direction of Wm. Dusedau of Brooklyn, N. Y. The 54 buckets hold 1 ton each. The upper terminal connects with the mine by a small Houston train 700 ft. long. The mill's capacity is being doubled, and several boarding houses erected. The mine and mill are under the general management of John W. Benson. The owner, Mr. Thomas Walsh, left recently to spend the winter in Washington, D. C.

Caroline Mining Company.—The force at this mine has been largely increased, and every available team in the county is hauling the ore to the railroad. The new compressor is being put in.

Cleopatra Mining and Smelting Company.—Manager Fowler of the Cleopatra smelter made an assignment recently to George Hurlbert and Charles Haskins, owing to his inability to secure enough desirable ore to pay expenses. The liabilities are said to be about $21,000. Mr. Hurlbert $11,000, and Hagerty & Du Prat $1,100, are the principal creditors. The assets are estimated at about $35,000, if fully realized upon, consisting of the plant itself, estimated at $33,000, several tons of ore and about $2,000 worth of matte.

Little Maude.—St. Louis parties have taken hold of this property, near the Silver Queen, and have a small streak of high grade ore. Several shipments have been made, the last to the Cleopatra Smelter just before its assignment.

O. & N. Tunnel Company.—This famous gold property has at last been worked out and all the effects sold off. No ore has been encountered for several months.

Silver Queen.—Frank Margowski, from this property on Bear Creek, is shipping to valley smelters large consignments of good ore.

GEORGIA.

Lumpkin County.

Dahlonega Consolidated Gold Mining Company.—Preparations are being made to prosecute work energetically at several of the mines near Dahlonega, which have been acquired by this new company. Some careful tests of ore are to be made before putting in the new plant, which the company expects to use. Capt. H. D. Ingersoll, the manager of the company, has been operating mines in this district for a number of years.

IDAHO.

Blaine County.

Pass Mining Company.—It is reported that this Hailey Company, at 400 ft., a vein 6 to 18 in. thick of good shipping ore, has been opened up for 70 ft.

Boise County.

Iowa Mill.—This 10 stamp mill at Quartzburg, owned by D. Conghanour, has been running steadily.

Lucky Boy.—The mill which started work recently is to run all winter. It is said that 5 stamps will be added very soon, and that a mill plant to handle the low grade ore will be put up next year. The ledge at the mines is said to be 80 ft. wide.

Placer Dredges.—The dredge at Placerville and the one at Idaho City stopped work last month. The Placerville dredge is reported to have had trouble with its sluice pumps, but the Idaho City plant handled 1,500 cu. yds. of gravel in 24 hours with success.

Twin Sisters.—The mill at Centerville is running steadily. The main shaft is to be sunk 100 ft. deeper.

Idaho County.

Comstock Gold Mining Company.—W. H. Phelps has been elected president of this company, and W. T. Hireen has been elected manager. The stamp mill now in operation on the property at Dixie is to be enlarged.

Owyhee County.

De Lamar Mining Company.—Manager Huntley's report for October states that 4,587 tons of ore were leached during the month, averaging $10.28 gold and $1.49 silver, while the tailings averaged $2.51 gold and $1.02 silver. The operating expenses were $33,560; the value of the bullion produced, $37,959, and the profit, $4,310.

Shoshone County.

Argentine.—It is said that this Wallace property has been leased to Spokane parties. It has laid idle since 1893, and when last worked employed 100 men. The ore is copper and silver.

Consolidated Tiger-Poorman.—The company has declared a 2c. per share dividend payable December 20th, the first since consolidation. The mine is employing about 175 men, and is shipping about 1,500 tons of concentrates per month.

Hecla.—This mine at Burke has doubled its force and is pushing work. The Galena pay streak is said to be 7 ft. thick and very pure.

Klondike Mining and Milling Company.—At the annual meeting at Wallace, the following directors were elected: R. H. Orr, J. E. Argo, Alex. Zimmerman, R. H. Vickers, P. Hyde, Al. Benicke and W. C. Clark. The board organized by electing R. H. Orr president, J. E. Argo vice-president, P. Hyde treasurer, and W. C. Clarke secretary. The tunnel on the property is now in about 350 ft., the last 1 ft. in carbonate of iron. There are 20 ft. yet to run on the present contract.

Standard.—The Wallace Company is putting in a new hoist at its mine. The hoist has 20 by 60 in. cylinders and a capacity from 2,500 ft.

ILLINOIS.

Macoupin County.

The Macoupin County Grand Jury that investigated the Virden riot returned true bills against Governor Tanner for omissions of duty and malfeasance in office; against F. W. Lukens of the Chicago-Virden Coal Company and several deputies and detectives for manslaughter; against J. D. Knotts, a miner, for assault with intent to murder Jacob F. Eyster, manager of the Climax Trading Company; against a number of guards on the train that brought the negro miners to Virden, and against several of the striking miners for inciting to riot.

MICHIGAN.

Copper.

Baltic.—The railroad is now extended to No. 3 shaft, where a new shaft house is under way. A new 7-drill compressor is being put in, giving a total power at the mine of 21 drills. The first level is at about 160 ft. Shafts Nos. 1, 3 and 4 are down this far. At No. 1 shaft the lode is 50 to 52 ft. wide; at No. 3 it is 22 ft. No. 1 shaft, where considerable rock has been taken out, will not be a permanent shaft. Work at No. 5 was recently resumed, and work at this point is to be pushed to prove the value of the northern part of the property. The workings at No. 6 had to be abandoned, but a drift from No. 5 will be driven toward it.

Centennial Mining Company.—At a meeting of the stockholders, at Boston, on December 7th, it was voted to increase the capital stock of the company to $2,500,000, divided into 100,000 shares of $25 each. It was stated at the meeting last month, working 19 days, the mine produced 52 tons of mineral.

Rhode Island Mining Company.—This company has been organized with $2,500,000 capital, to develop 80 acres of mineral land north of the Franklin, Jr., at Hancock. Thomas F. Mason, of the Quincy Company, is president.

(From Our Special Correspondent.)

Adventure.—Superintendent Harris of the Quincy mine has returned from Boston, and machinery is being delivered at the property. A railway line, 2½ miles long, has been surveyed to the mine. The working shaft has been unwatered and is now undergoing necessary repairs. It is about 200 ft. deep.

Franklin.—The loss of the stamp mills of the company last week has thrown 200 men out of work. A larger and more complete steel mill is being erected, and will be ready by spring. The burned mill having been built 40 years ago and improved by enlargement, there is ample room for a more economical and practical structure. It will be spring before stamping can begin. The old mill crushed 450 tons of rock every 24 hours.

Michigan Mine.—The two new shafts of this mine are now down 70 and 100 ft., respectively. One of these shafts is a single, the other a three compartment. Most of the old buildings have been removed. New buildings are going up and new machinery for the two new shafts is expected to be at work in a few weeks.

Quincy.—Thic company is now smelting its own copper.

Union.—A shaft has been started on what is believed to be the Arcadian lode, east of Calumet, for this new proposition. Considerable machinery is in place and more is on the way.

Winona.—Options have been secured by parties interested in this mine on the Valley lands, 320 acres, located just north of the Winona, for $110,000. These lands carry a continuation of the Winona lode.

Iron.

(From Our Special Correspondent.)

Shipments from Marquette have ceased, with a total of 2,228,000 tons, which is about 240,000 more than last year, and more than 500,000 tons in excess of any preceding year. Considerable ore will be shipped from the range by rail during the winter. Of the season's shipments from the port of Marquette the Duluth South Shore & Atlantic road handled a little more than half. This road will probably rebuild its No. 3 dock, it being only about 37 ft. high, and practically obsolete. More men are now at work in mines of the State than ever before and wages are nearly 40 per cent. better than a year ago.

A few of the new big boats that have been in the habit of trading to the head of the lake have carried ore from Marquette this season, the largest being the "Presque Isle" with cargoes of 6,200 tons.

Iron—Gogebic Range.

Dunn Mining Company.—This company, working the Newport Mine in Ironwood and the Palms Mine at Bessemer, has given a 10% raise in the pay of its employees, beginning December 1st.

Oliver Mining Company.—The company has granted a 10% raise to its employees.

Iron—Menominee Range.

Cundy.—For this mine, at Quinnesec, a new hoist and additional boilers have been ordered. The hoisting equipment will be furnished by the Webster, Camp & Lane Machine Company, of Akron, O. When the new machinery is installed, 100 additional men will be needed. The plant now at the Cundy will be moved to the Youngstown.

Dunn.—A cave-in at this mine recently will probably close operations. The Dunn was at one time the largest producer at Crystal Falls. Since 1893 the output has been decreasing and the principal work during the past two years has been removing the pillars that surrounded the shaft. It was the removal of these supports that caused the cave-in. The fee of the property is owned by Congressman Shelden and Luke

Welsh, and the mine was operated by the Dunn Mining Company, of which Ferdinand Schlesinger is the leading member.

Western.—At the Crystal Falls Mine new boilers are being put in. Two boilers out of the four that will be needed are on the ground, and these are being put in shape to use. It is the intention to place two boilers in No. 1 shaft, one in No. 2 and one in the Lincoln shaft.

MINNESOTA.

(From Our Special Correspondent.)

Shipments from Minnesota Iron Company's mines are still under way, and on Sunday last their were five large carriers loaded at Two Harbors. It is hoped to make about 6,000 tons more to the close of the year. The total to date has been 2,687,330 tons, making a grand figure of 2,693,862 for the entire year.

Shipments from the mines that ship over the Duluth, Missable & Northern road have closed, and are as follows:

Oliver Iron Mining Company, Mountain Iron mine, 650,021 gross tons; Oliver Mine, 385,792 tons, making Carnegie shipments off the Mesabi 1,035,813 tons; Lake Superior Consolidated Iron Mines, Rust, Hull & Burt, 139,510; Day, 18,725; Pillsbury, 99,691; Sellers, 112,725; Duluth, 112,155; Adams, 390,770 tons; Ohio, 65,597, making shipments by this company directly, 929,211 tons; Biwabik, 383,179; Franklin, 200,273; Commodore, 77,947 tons, making a total from this system of roads of 2,626,423 gross tons. This is about 300,000 tons more than the same road's business for the preceding year, but is scarcely up to the expectations of the early season. The Carnegie shipments were but 36,000 tons above that company's minimum agreements, and the business of the Biwabik and some other mines was not up to early hopes. It has been an enormous tonnage, nevertheless, and has taxed the road and its equipment, but has been moved with dispatch. Next year's business is likely to be considerably larger, and preparations for it are in progress. It is not yet decided whether or not a new dock will be built, but one will soon be needed.

The Duluth & Iron Range Road still has its troubles, its land grant case being yet on trial. The testimony will be over in a few days. The case does not develop any new features, the most important matter of the past week being the admission of the State's chief witnesses that if the harbor of Duluth were impracticable for ore docks, and if there were no available harbor between that city and Two Harbors, the State's line as projected would be impracticable.

Shipments over the Duluth & Iron Range road are as follows to the close of the season: Minnesota, 427,764 tons; Chandler, 714,788; Pioneer, 123,183; making a total from the Vermilion range of 1,265,735 tons, against 1,281,482 last year. Mesabi range shipments were: Roberts, 235,631; Fayal, 575,933; Elba, 564; Genoa, 277,677; Norman, 110,142; Sparta, 229,181; total, 1,428,126. The total shipments of the Minnesota Iron Company for the year were 2,342,499 gross tons, those of the Carnegie-Oliver Company, 1,158,996; Rockefeller Company, 929,211.

The Eastern Railway of Minnesota shipped 554,000 tons of ore, 530,000 from the Mahoning mine and 24,000 from the Penobscot.

This all makes a total for the year from Minnesota of 5,874,284 gross tons, and for ranges, Mesabi, 4,608,549; Vermilion, 1,265,735.

The Minnesota Steamship Company has closed an order with the Chicago Shipbuilding Company for two ships, one a steamer, and the other a consort, for the Two Harbors' trade next year. They are to cost $400,000, are to be out in June, and are to carry 16,500 gross tons. The steamer is to be 430 ft. keel, 50 ft. beam and 28½ ft. draft, probably to carry 8,000 tons. The schooner is to be the same, except 6 ft. longer. Both are to be of the heaviest construction. This will give the company a fleet of 10 steamers and 8 barges, all of the highest types, and ranging in capacity from 3,500 to 8,000 tons.

Copper.

(From Our Special Correspondent.)

North Star Mining Company.—This company, composed of Cleveland parties, who own mineral lands along the north shore of Lake Superior, has let a contract to prospect a copper vein that gives promise. The Cleveland company spent the winter of 1896-7 in exploiting some of its lands 14 miles northeast of Duluth. Other copper explorations are under way at north shore points more distant from the end of the lake, in conglomerate rock.

Iron—Mesabi Range.

(From Our Special Correspondent.)

Aetna Iron Company.—Diamond drill explorations have begun, claimed to be for the Consolidated Mines, though the lease of the property is in the hands of the Thomas Iron Company, and the fee in those of several local parties. The mine is partly developed by stripping, but has not been operated to any extent. There are some 1,500,000 tons of ore shown up so far.

Elba Iron Company.—This year's shipment was 500 tons, merely a sample lot. Next year it will be a large shipper, and will be able to mine all the ore likely to be wanted from it. This is the only mine being opened by the Minnesota Iron Company.

Eveleth Town Site.—Drill work has begun to test the value of the ore known to underlay the village, especially on the west half. The village is anxious to make some settlement with the owners of the land, Messrs. Robinson & Flinn and Murphy & Dorr, in reference to moving. The owners are willing to do what they consider reasonable, but have a strong leverage against the lot owners in the terms of the deeds, which exempt mineral rights, and permit the original owners to come in and take the lands if mineral is found.

Fayal Iron Company.—There are 250 men and two steam shovels at work on the stripping contract, and dirt is being thrown very fast. It is expected that frost will interfere before long so that work will quite largely stop till spring. A very large and fine body of ore is being uncovered.

Roberts Iron Company.—This mine has been reopened the past week and will operate all winter with about 100 men. It is an underground property.

Iron—Vermilion Range.

(From Our Special Correspondent.)

J. H. Southall, the backer of the Southall mine, southeast of Tower, has been sentenced to 10 years at hard labor in the State prison for forgeries in connection with Government time checks at St. Paul.

Oliver Iron Mining Company.—This company will sink another shaft to the depth of from 700 to 800 ft. The Pioneer mine is now raising about 500 tons a day, but this amount must be materially increased if the minimum output for 1898 is to be met; 350 men are at work. Zenith is stockfiling a little ore, as is Savoy.

MISSOURI.

Jasper County.

(From Our Special Correspondent.)

Joplin Ore Market.—The past week was a remarkable one in the mines. The output was large, and top grade zinc ore advanced $1 per ton to $40.50. It is said that big smelteries have determined to check the advance in the price of zinc ore, and that ore buyers of the district held a consultation for this purpose at Webb City during the week. Rumors, doubtless inspired, have been flying around to the effect that the price of zinc ore would drop at least $4 soon the coming week, but if severe weather continues the output of ore will be so seriously curtailed that the intended cut will probably not be made. The Eagle zinc ore sold at $40.50, but outside of that $39.50 is the best price paid. Lead ore was steady all week at $20.50 per 1,000 lbs. About 500 tons of zinc ore was left over, which could not be loaded, but much of it was sold, and if the entire output had been loaded the week would have been the greatest in the history of the district. During the corresponding week of 1897 zinc ore sold at $24.50 per ton, and lead ore sold at $24.25 per 1,000 lbs. The sales of zinc ore were less than for the past week by 3,025,070 lbs., and the lead ore sales were less by 176,920 lbs., while the value was less by $98,652. For the corresponding 48 weeks of last year the output of zinc ore was less than for the corresponding period this year by 87,666,140 lbs., but the lead ore sales were greater by 6,358,150 lb.; the value was less by $2,141,663. As compared with the preceding week the sales show an increase of 1,602,250 lbs. of zinc ore and 281,590 lbs. of lead ore, and the value is greater by $37,231. Following are the sales of lead and zinc ore from the different camps of the district for the week ending December 3d: Joplin, zinc, 1,606,280 lbs.; lead, 337,630 lbs.; value, $37,842. Carterville, zinc, 1,113,300 lbs.; lead, 102,080 lbs.; value, $21,019. Webb City, zinc, 470,840 lbs.; lead, 49,400 lbs.; value, $9,111. Oronogo, zinc, 821,990 lbs.; lead, 10,990 lbs.; value, $16,139. Central City, zinc, 429,750 lbs.; lead, 28,140 lbs.; value, $8,742. Stotts City, zinc, 202,190 lbs.; lead, 55,260 lbs.; value, $5,095. Duenweg, zinc, 625,050 lbs.; lead, 64,570 lbs.; value, $12,262. Galena, zinc, 2,480,250 lbs.; lead, 224,290 lbs.; value, $47,380. Aurora, zinc, 1,255,000 lbs.; lead, 20,000 lbs.; value, $17,365. Belleville, zinc, 179,790 lbs.; lead, 5,940 lbs.; value, $3,628. Carthage, zinc, 123,880 lbs.; value, $2,478. Wentworth, zinc, 87,500 lbs.; value, $1,663. Hell's Neck, zinc, 47,150 lbs.; value, $896. Alba, zinc, 42,350 lbs.; value, $826. District totals for the past week, zinc, 9,490,820 lbs.; lead, 898,300 lbs.; value, $184,425. District totals for the past 48 weeks, zinc, 416,117,420 lbs.; lead, 48,822,580 lbs.; value, $6,386,256.

MONTANA.

Beaverhead County.

Placer Dredges.—The last dredge boat to shut down on Grasshopper Creek, near Bannack, was the "A. F. Graeter." The "Maggie A. Gibson" closed down a few days sooner. This is reported to have been a very profitable season for the big machines.

Deer Lodge County.

Montana Copper Company.—This company has been incorporated with 1,000,000 shares of $1 each. The company proposes to develop property in the northern part of this county. Lieut. Governor A. E. Spriggs is at the head of the concern. Boston parties are said to be interested.

Gallatin County.

Mountain House Coal Mines.—C. W. Hoffman of Bozeman is developing this coal property on the divide between the Gallatin and Yellowstone valleys, not far from Bozeman. A railroad is nearly to the property, and shipping may begin this month.

Granite County.

Garnet District.—According to the Anaconda "Standard" the gangue rock of most of the veins of this district is a vitreous white quartz, heavily impregnated with auriferous iron pyrites and usually carrying copper and lead in more or less quantities. Near the surface the ore deposits are oxidized and of a free milling character; this oxidized zone only extends down about 60 or 100 ft. Below this brittle iron pyrites make concentration difficult. Copper and lead also occur, copper as pyrites, soft glance and brittle gray copper; lead as galena running well in gold. The presence of these two minerals hinders treatment by cyanide. At greater depths, as in the Mammoth mine at Coloma, the minerals of the ore become hard and tenacious, while the gangue rock is soft and brittle, making a good concentrating ore.

The only attempt to treat the ore has been made at the Mammoth Company's mill at Coloma and the Mitchell & Mussigbrod mill at Garnet. At Coloma the oxidized ore was most successfully treated, both at the Mammoth mill and at the Stone & Loomis mill, by the simple battery and plate amalgamation. At the Mammoth mill the cyanide process was introduced last winter, but was abandoned. The Mitchell & Mussigbrod mill at Garnet has treated oxidized ore at different times with more or less success.

Sun Rise.—The Thompson Investment Company has bought a controlling interest in this mine, 12 miles from Drummond, and near Philipsburg. The price is said to have been $25,000 for 265,000 shares. The property is a gold mine, good money, but has not been worked for 18 months. There is said to be a vein of over 8 ft. wide, which, according to assays, carries $7.40 in gold to the ton. There is on the property a 20-stamp mill.

Jefferson County.

Hope.—A large station pump has been put in at the 500-ft. level of this Basin mine, and the drift is to be driven 50 ft. each way from the shaft when sinking will be resumed.

Madison County.

Kennett.—The employes of this mine, near Virginia City, have been laid off. It is understood that the shut-down is temporary, and that the management proposes to sink the shaft several hundred feet deeper. Many of the employees were notified that their positions would be open for them again soon. W. B. Millard, the owner, has been in Omaha.

Missoula County.

Missoula Placer Mining Company.—John Groesbeck, manager of this company, reports that this season's work has been very successful. The clean-up was large and the prospects for next season are excellent. The pay streak is said to average 40c. a yard.

Silver Bow County.

Anaconda Mining Company.—The suit against Richard James to determine the ownership of the Buffalo lode mining claim, which was filed in March 1892, has by mutual agreement been continued for 9 years from January 1st, 1890. According to the terms of the stipulation the case is not to be deemed abandoned nor subject to dismissal for want of prosecution and states:

"That at the expiration of said period the plaintiff shall be entitled to a judgment for possession of the premises without damages. That meanwhile the defendant may remove any or all improvements he has made upon the property."

NEVADA.

Storey County—Comstock Lode.

Hale & Norcross Mining Company.—In the Superior Court at San Francisco, December 2d, the various parties in the litigation over this company's property announced that a compromise had been agreed upon, without settling the question of the legality of either of the parties claiming to be directors of the company. Both consented to a division of the money received under the judgment of the Fox suit. The attorneys for the Grayson and Fox boards of directors had heretofore presented a petition for a modification of the recent order of distribution, and Judge Hebbard made a formal order allowing the petition to be filed. The petition was signed by all the contending parties, including M. W. Fox and G. W. Grayson. It asked the Court to modify the order so as to declare a dividend of $1.50 a share upon 112,000 shares of stock, which would make a total of $168,000 to be distributed among the stockholders, leaving

a balance of $43,270. Upon filing the petition Judge Hebbard ordered a hearing to determine whether the proposed modification was satisfactory to all the parties in interest.

Thereupon there was produced to the Court resolutions approving the plan passed by both the Fox and Grayson boards, and an independent petition signed by the holders of 93,000 out of the 112,000 shares of stock. Stockholders and directors united in showing their approval of the plan. The resolutions recognized the justice of the claim of W. M. Fox to be compensated for the expense of carrying on the litigation. Both S. W. Grayson and M. W. Fox testified to the action of their respective boards, and Secretary Collins testified that he had personally interviewed the 56 stockholders whose names appeared upon the petition.

At the conclusion of the hearing Judge Hebbard declared that it appeared to him that the proposed arrangement met the wishes of all the persons whose interests entitled them to be considered, and that the only course open to a court was to rescind the previous order of distribution and make a new one. Accordingly he entered an order granting the prayer of the petition.

The final order of the Court directs the receiver to forthwith pay to the stockholders a dividend of $1.50 a share, and to divide the surplus as may, under a subsequent order of the Court, be agreed upon by a committee consisting of George Ives, Charles E. Paxton and Henry Wadsworth. During the discussion the fact was brought out that of the original owners of stock at the commencement of the litigation M. W. Fox alone remains. With that exception, the stock has all changed hands. The final order contains a further allowance to Receiver Groom of $2,500, to be paid when he has finished his work.

NEW MEXICO.

Colfax County.

Ortiz Mining Company.—This company at Cerillos has been experimenting with a series of rollers which pulverize the ore before it passes from the crusher to the mill.

San Pedro Placer.—The placer machine has been, according to report, doing satisfactory work, though troubled by a short water supply.

Grant County.

Elizabethtown District.—Renewed activity is reported among mining men in this district. The 45-stamp mill at Baldy has started up.

Montezuma Mining and Milling Company.—This company has its new shaft at Elizabethtown down 100 ft.

Socorro County.

Timber Peak Mining Company.—The company is erecting a mill to treat the low grade ore of its mine at Socorro. The mill will be of steel, and will have a capacity of 150 tons daily. The equipment will consist of two 10x20 Blake crushers, six sets of Reliance rolls, 36x14, six sets of conical screens with hydraulic sizers, elevators, etc. The product is to be finished on 20 6-ft. Reliance vanners. The machinery has been ordered, while the construction steel will be on the spot as soon as the foundations have been completed. The mill will be one of the largest in New Mexico, the only other one of greater capacity being the mill of the Cochiti Mining Company at Bland.

OREGON.

Baker County.

Twin Springs Company.—F. S. Lewis of this company has purchased the Deer Lodge Mine, near Baker City. The Deer Lodge is on the same vein as the Bonanza, Eureka & Excelsior and North Pole, and adjoins the latter. There have been 800 ft. of work done on the mine, and it shows a vein 16 ft. thick. It is the purpose of the new owner to drive a tunnel on the vein 3,000 ft., securing 1,400 ft. of overhead stoping. A 40-stamp mill is proposed at the mouth of the tunnel.

Grant County.

The dredger of the Griffeth & McDevitt Construction Company of Chicago has begun work on the gravel beds of John Day River, in Grant County. The machinery handles 2,000 yds. of dirt every 24 hours. Two shifts of five men each are employed. A 50-light capacity dynamo has been placed on the boat. The company has several dredgers under construction, one in Montana, another in Utah.

PENNSYLVANIA.

Anthracite Coal.

It is stated that a party of Scranton coal men, headed by Daniel Williams, are to erect a large breaker in the outskirts of Pottsville. A slope is to be sunk soon.

Enterprise Coal Company.—The breaker at Enterprise Colliery, near Shamokin, was blown down December 5th. The damage is estimated at $100,000. The breaker was rebuilt a few years ago, and was one of the finest in the section. Congressman William Connell and his son, ex-Mayor Connell, of Scranton, are the principal stockholders. Four hundred men and boys are thrown out of employment. The breaker will likely be rebuilt.

Lehigh Coal and Navigation Company.—The fire in No. 8 shaft has been drowned out and the company has begun boiling out the 549 ft. of water. It will take 3 months to complete the task.

Lehigh Valley Coal Company.—This company, it is stated, will have possession of the North Ashland colliery after January 1st. It is now operated by the Reading. It is part of the property of the Girard Estate, and has been in continuous operation since 1861, when it was started by John Anderson, of Wilmington, Del. The Lehigh company will carry the coal to the Continental Mine and not use the North Ashland breaker. The gravity plane at Big Mine Run will be abandoned after January 1st.

Maderra, Hill & Company.—H. K. Christ, of Mahanoy City, has closed a contract with these Philadelphia coal operators to build a washery at Preston Colliery culm banks, near Girardville. The new washery will have a capacity of 20 cars daily, and will be built on the same plan as the Stoddard washery, at Gilberton. It is to cost $40,000, and will contain modern machinery. It will be in operation next spring.

Parrish Coal Company.—An explosion of gas in the Buttonwood shaft, near Wilkesbarre, on December 4th, severely burnt 7 miners. The explosion was caused by a slight fire at the head of No. 1 plane.

Primrose.—Two miners were badly burned by an explosion of gas in this colliery, near Mahanoy City, on December 4th.

Bituminous Coal.

Northwestern Mining and Exchange Company.—This company, which has been operating in Elk County for 25 years past, has, it is reported, acquired 7,000 acres of bituminous land south of its present holdings.

(From Our Special Correspondent.)

Connellsville Coke.—A feature in the Connellsville region that has been little noticed is the introduction of coal crushers. One of these is at Adelaide, one of the H. C. Frick Coke Company plants, near Connellsville. The crusher is merely a series of rolls, arranged at the tipple and coal bins, for the purpose of crushing the coal before it is charged into the coke ovens. As is well known, Connellsville coal is dug without blasting, being very soft, and every miner is instructed to place no large lumps in his wagons, but some do get in and when the oven is charged, the pyramidal form of the coal heaping up under the crown of the oven allows the lumps all to slip down to the walls of the lining on the outside of the charge. These sometimes do not form coke of a fine cellular structure, and it is mainly to obliterate this feature that the crushers are installed. Again, the crushing mingles throughout the whole body of the charge any foreign substances, such as slate, and although the composition of the whole will not be changed when the coke is burned, there will be no clinkers, and the screens at the crushers also catch much of the slate.

Mariette & Stillwagon Coal Company.—The Pennyroyal Mine at Connellsville is the only mine in the Connellsville region that makes a business of shipping coal. It was worked 365 days last year at full capacity, and night shifts were employed for three months also. The mine supplies coal to Baltimore & Ohio engines. The company has just completed a 600-ft. trestle and coal station, and will supply all kinds of coal and coke as soon as the Baltimore & Ohio siding is completed.

Slate.

(From Our Special Correspondent.)

Albion State Company.—A force of men has been put to work taking out the balance of the rubbish remaining from the great slide of 6 years ago. Four hoists will be used and every effort made to clean up the quarry by next spring, when an effort will be made to increase the production to 6,000 squares per month.

American Slate Blackboard Company.—The annual meeting of this company was held on Wednesday at Phillipsburg, N. J. The following officers were elected: President, A. S. Haines; vice-president, J. K. Hower; treasurer, Charles Shuman; secretary and general manager, R. H. Dalby.

Bangor Excelsior Slate Company.—A conference between operator and employees was held on December 14th, when the former submitted a scale of prices and a proposition for the men to return to work. At a meeting of the employees the same evening it was decided that the prices were altogether too low to justify returning to work.

Bangor Washington Slate Company.—All the employees quit work recently because their wages were not forthcoming. The company is 5 months in arrears with its men, and an effort is being made to secure the necessary funds.

Laurel Hill Slate Quarry.—This property, which was bought by a Philadelphia party some time ago, will shortly be worked. Between 30 and 40 men will be employed.

Old Delabole Slate Company.—Excavations made by the company on that part of the property lying nearest to Pen Argyl, have exposed several beds of excellent slate. Other excavations are being made in the same vicinity, and if favorable results are obtained a new quarry will be developed.

Washington Slate Company.—A new blackboard and mantel factory is being erected near the quarries, at Slatington. The company also intends putting up a brick kiln and utilizing slate rubbish for material.

West Albion Slate Company.—A reduction of 5c. per square on roofing slate has been accepted by the employees.

SOUTH DAKOTA.

Lawrence County.

(From Our Special Correspondent.)

Astoria Mining Company.—This Deadwood Company, capital stock $100,000, has been incorporated. Incorporators: E. H. Harriman, New York; N. W. Wells, Schuyler, Neb.; Ben Baer, Harris Franklin, Nathan Franklin, Deadwood.

Baltimore & Deadwood.—Work on the foundation for a 20-stamp mill has begun northeast of Central City. It will be at the foot of the mountain, 1,000 ft. from the mine, which will be reached by a tramway. Water will be pumped from bedrock. Mill is to be completed by February 1st. Miners will soon be put to work.

Copper Claims.—The tunnel on the copper ground on City Creek, in Deadwood, has been bonded to a Detroit company. The company has bonded about 1,000 acres of ground, extending from City Creek, in Deadwood, a distance of 2 miles south, nearly to Kirk. It is one of the largest bonds ever taken in the Black Hills. D. C. Baker, of Deadwood, is superintendent.

Deadwood & Delaware Company.—A new Prescott pump is purchased for the Delaware shaft, which is being put down to lower quartzite in the center of Ruby Basin. Quartzite was struck with a diamond drill at 550 ft., and the shaft is down over 300 ft. An unusually large amount of water is in the way. The shaft drains the entire basin. The new pump will have a capacity of 1,200 gals. One of the most complete hoisting plants in the Black Hills has been erected over the shaft.

Detroit & Deadwood.—Quartzite was struck this week in this mine in Two Bit. The shaft was sunk 200 ft., then a churn drill put in, and a hole sunk 100 ft. deeper. The shaft will be sunk the additional 100 ft., and crosscuts run.

Edgemont & Union Hill.—This company has been reorganized with new directors and officers. The directors are: George A. Fletcher, president; N. Penrose Allen, treasurer; J. Wesley Supplee, Malcolm Lloid, Savery Bradley, C. S. Middleton, of Philadelphia; Bradford M. McGregor, William Archer, New York; Joseph T. Crater, Easton, Pa.; Walter J. Busby, Morristown, N. Y. Percy S. Bickman is secretary. For the present, Savery Bradley will be in charge of the company's business in the Hills.

Great Northern.—Quartzite was struck in the shaft at this place at a depth of 500 ft. Crosscutting will commence.

Highland Chief.—A contract has been let to W. M. Barker, of Deadwood, to sink the shaft in the Eldorado Mine, belonging to the Highland Chief Company, in Spruce Gulch, another 100 ft. A fair sized ledge of partly free milling ore will be followed. Work has also been resumed in the Champion. M. H. French, of Michigan, president of the company, has been spending some time in the hills, starting work.

Pennington County.

(From Our Special Correspondent.)

Big Hit Mining and Milling Company.—The main building for the new concentration plant, a mile from Keystone, is nearly completed. Its floor space is 87 by 160 ft. The machinery to be used, three boilers, 100 H. P. each, two engines 250 H. P. Atlas make, complete hoisting plant furnished by the Gates Iron Works, and Snow pump, has all been ordered. The concentrating mill is being built at the head of Buckeye Gulch, a mile from the mine. A complete hoisting plant will be erected at the Bismarck, which has been developed. The test runs on the ore made on several thousand tons at the Ingram custom mill show the value to be about $3 free-milling and $30 concentrates. Prospecting continues at the Big Hit Mine, a mile east of Keystone. The property is owned by John Barth, of Milwaukee. John G. Mattes, of Keystone, superintendent.

Crown Hill Company.—At a depth of 135 ft., a body of galena ore was struck in the Spokane shaft. The company has overhauled the old Glendale tin mill, and began crushing ore. This company owns mining property at Crown Hill, and a contract was recently made to have 1,000 tons of ore treated at the Spearfish cyanide plant. Eventually, the Crown Hill ore will be shipped to the new smelter at the Spokane Mine, which the company will erect.

Cuttysark.—W. L. McLaughlin, John Blatchford, of Deadwood, and John Gray, of Terraville, and others, have a bond and lease on this property, north of Rochford. The shaft is down 130 ft., and a fair-sized body of ore is exposed. The

company has a 10-stamp mill, about one mile from the mine, which will start up soon.

Holy Terror.—Ten of the new stamps at the Keystone mill are dropping. The other 10 will begin work as soon as the ore is brought from both the Keystone and Holy Terror. It is probable that the old 10-stamp mill will continue for some time.

King of the West.—The first run on ore from this mine, in Hornblende Camp, is being made at the Montezuma mill, at Rochford. A tunnel has been driven 60 ft. into the ore ledge. The mine and mill are bonded to Carl Blank, of Deadwood, and H. Donnell, of Boston.

Rapid City Chlorination Plant.—Steam was turned on the engines this week for the first time. The delay in finishing the plant has been from lack of brick. Col. Day expects to be treating ore in two weeks.

TENNESSEE.

Maury County.

International Phosphate Company.—This company, recently organized at Mt. Pleasant, has bought 700 acres of phosphate land near there, together with the property formerly operated by Messrs. J. H. Carpenter & Co. The company will erect a plant for preparing rock for the European market. The officers of the company are J. H. Carpenter, Mt. Pleasant, president; E. Strudwick, Richmond, Va., vice-president, and S. Strudwick, Richmond, Va., secretary and treasurer.

UTAH.

(From our Special Correspondent.)

Bullion and Ore Shipments.—During the week ending December 3d the bullion and smelter products forwarded East from the different smelteries and camps of the State were: 22 cars, or 818,756 lbs. lead-silver bullion; 2 cars, or 82,109 lbs. copper bullion; 24 cars, 1,118,540 lbs. lead-silver ore.

Smelter Products.—Park City continues to produce a smaller output of ore and concentrates than in the corresponding months of 1897. Tintic will have a much bigger December production than last year. Fish Springs promises to do better. Bingham will end the year in a quiet way. Local smelteries will have their needs more generously supplied than during the previous winter and there will be more ore for shipment East. It is cheering to note that mine owners are complaining less over the lower quotations of lead and silver than formerly.

Juab County.

(From our Special Correspondent.)

Tintic Shipments.—In the week ending December 3d the ore and concentrate shipments, from the 3 railroad points of the district, were 110 cars, contributed as follows: Grand Central, 29 cars, ore; Gemini, 12 cars; Swansea, 10 cars; Bullion Beck, 6 cars; Uncle Sam and Humbug, 10 cars; Mammoth, 5 cars; South Swansea, 5 cars; Centennial Eureka, 2 cars; Godiva, 2 cars; Utah, Sunbeam and Joe Bowers, each 1 car ore and Dragon Iron 18 cars hematite for flux, in all 102 cars. The Eureka Hill sent out 5 cars of concentrates and Mammoth 3 cars. There were no bullion consignments for the week.

Northern Spy.—On November 28th an assessment of 10c. per share was levied, and it is given out that systematic exploration is to be immediately set on foot. This is a Tintic old-timer, which was a copper producer.

Summit County.

(From Our Special Correspondent.)

Park City Shipments.—For the week ending December 3d the ore and concentrate products sent forward from the Mackintosh Sampler amounted to 1,837,260 lbs. and were contributed by the Silver King with 1,431,710 lbs. crude, and Anchor with 405,550 lbs. concentrates. In November the shippers were: Silver King, crude, 3,673,440 lbs., concentrates 346,910 lbs.; Anchor, concentrates, 1,555,120 lbs.; Ontario, crude, 954,920 lbs.; Cooney, concentrates, 72,000 lbs; Loring Brothers, concetrates, 52,630 lbs.; Clark's Woodside, crude, 26,990 lbs.; Malone, concentrates, 18,800 lbs. Total for the month, 6,700,830 lbs., compared to 4,761,796 lbs. for November, 1897. Since January 1st to December 1st the total smelter products shipped through the Mackintosh sampler are 72,089,715 lbs., or about 30% more than for the same months last year.

Ontario.—Last week more men were put to work underground. Each day it seems more probable that the current reports about resuming more active operations have a substantial foundation.

Valeo.—On December 1st the newly-elected directors chose officers for the current year, as follows: Thomas Kearns, president-manager; Mrs. Susan B. Emery, vice-president; John H. Deming, secretary-treasurer. An assessment of 5c. per share was levied to continue development. It was decided to change the time of the stockholders' annual meeting to the third Tuesday in January. The secretary was instructed to charge 25c. for each stock transfer made hereafter, a move which is being combated by the Salt Lake City Exchange.

Tooele County.

(From Our Special Correspondent.)

Ophir Hill.—The concentrating mill was closed down December 1st after running since June, during which period 6,000 tons of concentrates were marketed. Manager W. G. Nebeker has put the property in fine trim. The incline shaft is down 575 ft. It is just announced that W. A. Clark, of Butte, has bought the interests of Col. E. A. Wall and A. G. Campbell, which is considerably more than the control; the consideration is given as $100,000.

Overland.—The cyaniding mill is giving satisfactory results. Probably the electric hoist will be in commission by New Year's, when the mill will begin handling its full capacity.

South Daisy.—Drift on the 300 level has exposed an ore face from 9 to 14 ft. thick, carrying $9 to $14.50 gold per ton. It is one of the most important uncoverings made on the West Dip.

Utah County.

(From Our Special Correspondent.)

Sunshine Water Line Company.—Incorporation articles were filed with the Secretary of State on December 1st. Capitalization, $50,000; shares, $100, with 300 shares in the treasury. Principal office at Salt Lake City; annual meeting, first Monday in December. Officers and directors are: Gill S. Peyton, president; W. Arthur Sherman, vice-president; C. E. Peyton, secretary-treasurer; Laura R. K. Sherman, Ida M. Peyton, all of Salt Lake City. The primary object of the company is to own and develop water in Cedar Valley for the use of the Overland and other mines at Sunshine, 5¼ miles distant and 1,500 ft. higher elevation than the valley. Contracts are let for the pumping plant and pipe line, and it is expected that water will be furnished to the Overland Mine and mill early in February next. Throughout the Mercur region water is a commodity of great value, and for this new supply there will be a profitable market.

Uintah County.

(From Our Special Correspondent.)

Grizzly.—An irregular seam of bonanza rock was opened a few days since, which has yielded 1,275 oz. silver and 61% copper. This claim is in the Carbonate district, and is owned by the Pope Bros. of Vernel. It is near the old Victoria, and is supposed to be on the same ledge.

Uintah Summit.—A second carload of copper ore is being freighted to the railroad. Returns from the first car, received a week ago, gave 49½% copper. It is expected that active mining will continue during the winter.

WASHINGTON.

Okanogan County.

(From Our Special Correspondent.)

British America Corporation.—This company purchased the Leadville and Pinnacle groups of claims on Palmer Mountain, in September, and started work October 24th. I learn from a reliable source that a pocket of very rich ore was cut November 16th in a tunnel on an 8 ft. ledge of the Bunker Hill. The ledge is white quartz, which usually carries iron sulphides, rich in gold, and some galena. The rich quartz is called "specimen quartz." Similarly rich pockets have been found in the Summit, Black Bear, Leadville, Rainbow, Triune and Palmer Mountain properties, and also in the Honeycomb, belonging to the Okanogan Gold Mine group. Some of the officials of the company arrived at Loomis on November 20th. The strike has stimulated work at Loomis. An extra force of men will be put on.

Stevens County.

(From Our Special Correspondent.)

Sheridan District.—The Zella M. and Fanny Woodward claims are developing. They are about 12 miles north of Republic, on a bedded vein in porphyrite, 4½ ft. wide. The vein filling is quartz and soft porphyry, the latter carrying about $14 per ton. The shaft is down 60 ft. At the surface a vein of rich ore was developed 16 in. wide, carrying black sulphurets and chloride of silver, with high values, and assays running very high in gold, silver and copper. Two short drifts at 20 ft. depth shows the rich pay streak from 30 in. to 3 ft. in width. At 53 ft. a drift has been driven southward, showing an increase in the width of the pay ore, and at the bottom of the shaft it is 3 ft. wide.

The directory of the Lone Pine, Pearl and Surprise companies has been changed, and Mr. Patrick Clark is now the president of each of them. The Lone Pine has been idle about two years, as the principal shareholders are interested in the Republic and wished to put that mine on a paying basis. It was the rich assays of Lone Pine ore which ran as high as $300 per ton, that caused the first excitement in Republic camp. Work has been resumed with four men.

Ben Hur.—A new discovery has been made of $50 ore in the croppings on the south end of the Ben Hur. This is the richest part of the mine.

Black Tail.—A pay shoot has been struck on a raise from the south drift from a raise from the tunnel level of this claim, the first located in the camp. The strike is on a 2-ft. vein east of the main lode, which widens to 4 or 5 ft., where the ore is richest.

Golden Harvest.—The tunnel is in 396 ft. to the pay shoot, which is from 40 to 50 in. wide at the face. The ore runs from $22 to $45 per ton in gold. At the face the tunnel is into the vein at a depth of 170 ft. The apex of the vein is about 600 ft. above the San Poil River, and the company contemplates running a tunnel to tap the vein at a depth of about 500 ft.

Iron Monitor.—A controlling interest in this Iron Monitor claim, on a vein west of and parallel with the Republic lode, having passed into new hands, a contract has been let to drive the main tunnel to the oot-wall of the vein from the mouth of the tunnel, that being the estimate of distance.

Lily.—Work has been started upon this claim, near the Republic. A shaft is being sunk upon the cropping. The Pocahontas claim has been incorporated and an incline shaft is being sunk.

Little Cove.—The north drift is in 340 ft. from the shaft. The 300-ft. crosscut passed through 10 ft. of quartz, with the values somewhat lower than in the ledge to the southward.

Mountain Lion.—The manager has been away investigating processes for treating gold ores. The compressor plant has been ordered and will comprise an 80 H. P. boiler, a 42 in. x 10 ft. compressor, and Little Giant drills. Buildings have been erected and the compressor machinery will be installed as soon as it arrives. The plan includes a mill of 100 tons daily capacity to be erected as soon as the compressor is running.

Quilp.—Work has resumed in this property. The tunnnel is temporarily dropped and a shaft is being sunk in the croppings. A shaft is being sunk on the Mary Ann ledge, on Copper Mountain.

Republic Gold Mining and Milling Company.—The company has declared a third monthly dividend of $30,000, payable December 10th. On No. 3 level drifting is being rapidly pushed on the pay shoot, and a raise will soon start to meet a winze from No. 2 level. About 40 ft. down in the winze a large bunch of ore was found that assayed per car sample $999 per ton. It is these rich bunches that run up the values in the first class ore. The men are temporarily laid off in the stopes, as teams can not be had to haul ore. A railroad to the camp is much needed.

San Poil.—The north drift is in 55 ft., with pay quartz the full width of the tunnel at the face. The south drift is in 80 ft. At the face the quartz is 4½ ft. wide, and carries good values.

Snohomish County.

Tacoma Smelter & Refining Company.—According to Tacoma papers this company is to be reorganized. It will be controlled by the Bunker Hill-Sullivan Mine at Wardner, Ida., and the Alaska-Treadwell, Alaska-Mexican and the Alaska-United mines on Douglas Island, near Juneau. Mr. H. Bratnober, the representative of the Exploration Company interests, is to be one of the stockholders.

FOREIGN MINING NEWS

AFRICA.

Rhodesia.

The Rhodesia Chamber of Mines has issued its first monthly bulletin for September, 1898. It records the operations of three companies, as follows:

	Stamps.	Tons worked.	Gold, oz.	Per ton.
Geelong Gold Mining Co....	20	2,260	1,417	0.64
Selukwe Gold Mining Co...	20	646	400	0.62
Premier Tati Monarch Reef Co.	30	2,245	529	0.24

The total gold yield was 2,346 crude oz., which, at the values given, was equal to 2,053 fine oz., or $42,428.

AUSTRALASIA.

New South Wales.

Broken Hill Proprietary Company.—For the four weeks ending November 10th this company reports 20,108 tons of ore treated. The refinery turned out 2,039 tons lead, 40 tons hard (antimonial) lead, 307,601 oz. silver, 2,735 oz. gold, and matte containing 25 tons copper and 13,860 oz. silver. The total silver yield was, therefore, 321,461 oz. The average result was 10.3% lead, 15.99 oz. silver, and 0.14 oz. gold to the ton smelted.

Queensland.

Mount Morgan Gold Mining Company.—This company reports for October a total of 17,934 tons of ore treated in the chlorination plants. The yield was 13,607 oz. gold, showing an average return of 0.76 oz. to the ton. The new plant is now treating a large quantity of the low grade ore, which accounts for the lower average return.

Tasmania.

Mount Lyell Gold Mining Company.—This company's statement for the four weeks ending November 16th shows 18,844 tons of ore smelted. The yield was 561 tons black copper, containing

555 tons copper, 64,092 oz. silver, and 2,434 oz. gold. The average result was therefore 2.95% copper, 3.40 oz. silver, and 0.13 oz. gold to the ton.

CANADA.

British Columbia—Cariboo District.

Cariboo Gold Fields Company, Limited.—This company made a short run. The pit is opened and the hydraulic elevator in place to strip the old channel on Williams Creek.

Drainage Company.—This company is running a drainage tunnel on Lightning Creek.

Exploration Company.—This London company has let a contract for a lot of mine timber for a 3 compartment shaft on Slough Creek.

Slocan Cariboo Mining Company.—This company is running a tunnel to tap deep gravel on Canadian Creek. A Mr. Windt of Toronto is superintendent.

British Columbia—West Kootenay District.

(From Our Special Correspondent.)

Bosun.—Three carloads of argentiferous lead ore, recently shipped from the Slocan Mine to the Chicago & Aurora Works, at Aurora, gave a net return of $4,015. Another shipment has been made, this time from No. 2 shaft.

East Le Roi.—Work on the old Nickel Plate continues under the superintendence of W. S. Haskins. It is reported that the ore shoot recently found is gradually widening.

Iron Mask.—The shipments for 11 months are 3,236 tons net. The figures showing shipments heretofore given were gross.

Le Roi.—The new management is shipping about 2,500 tons weekly.

Rossland Ore Shipments.—For the 11 months of 1898 ending November 30th these amounted to 118,000 tons.

Sunset No. 2.—J. C. Drewy, managing director, reports that the drive running to the discovery shaft is now within 120 ft. of the shaft. Joseph Trainor is in charge of the development work, and reports that favorable indicattons continue.

War Eagle.—The gross shipments from this mine, for the 11 months ending November 30th, are 48,000 tons.

White Bear.—J. C. Cole, president and managing director of this company, reports the work on the Crosscut running north continues, with favorable prospects.

Northwest Territory.

Omineca Consolidated Mining Company.—The water rights and claims of this company on Germansen Creek have been bought by the St. Anthony Exploration Company of Santa Barbara, Cal.

Yukon District.

Hydraulic Mining Regulations.—The Dominion Department of the Interior has promulgated these new regulations for hydraulic mining in the Yukon: All locations are to be disposed of by public competition and awarded to the highest bidder. Each location shall be 5 miles long by 1 mile deep. In addition to the bonus, a rental of $150 per annum shall be paid on each location, and a royalty of 10% on all gold taken out in excess of $25,000. The lessee is required to begin active operations within one year from the date of the lease, and expend $5,000 yearly in extending his location from the date of the lease. All timber required in operating and working his lease will be allowed the lessee of his location, without payment of dues. Any bona-fide occupation will be recognized by the Gold Commissioner. Each alternate claim is recorded.

The Minister of the Interior is authorized to issue a license to any person who has, previous to the date of the regulation, filed an application in the Department of the Interior or in the office of the Gold Commissioner of the Yukon, for such a location, provided that the Commissioner has reported that it has been proved to his satisfaction that the applicant himself, or a person acting for him, was upon the ground actually prospected previous to the date of the regulations, and provided, further, that the Gold Commissioner has reported that the ground included in the location is not being worked and is not suitable to be worked under the regulations governing placer mining. The leases to be granted under this section are limited one to each applicant, and the leases are subject to the conditions of the regulations.

CUBA.

Dr. J. W. Langford, of Arizona, and 12 of Roosevelt's Rough Riders have gone to Santiago to prospect for gold. They said they expected to locate a gold claim on San Juan Hill.

NEWFOUNDLAND.

Petroleum.—It is announced that an English syndicate with a capital of £250,000 sterling has been formed to develop the Parsons Pond oil wells on the west coast of Newfoundland. If the wells sunk yield well, pipe lines will be laid to the nearest port, either Bonne Bay or Cow Head, to facilitate shipment. The owners of the property at St. John's are to receive £12,000 and one-third interest in the workings.

COAL TRADE REVIEW.

New York. Dec. 9.

Anthracite.

The anthracite market so far as the weather is concerned has better prospects ahead, and dealers feel more confident. There are other conditions than the weather affecting the present and the immediate future, the chief of these being the large stocks reported in first hands and at tidewater. Consequently all the talk that comes from Philadelphia and Wall Street about "agreements" and a 50c. advance on January 1st, is to be taken with several grains of salt. In the West, there is a good run of business at the head of the Lakes and other Minnesota points. There was as much coal as possible rushed up to Duluth and Superior docks at the end of the season at rates 20c. higher than during the Summer. Prices are unsettled, but nut is reported at $4.50 and stove $4.25. The outlook for higher figures is favorable. In Chicago territory coal is coming in by rail, and the difference in price in favor of chestnut is less marked. In the East retail trade has been helped greatly by cold weather, for consumers as a rule had light stocks on hand as well as retail yards. It is not thought that the demoralization of coastwise traffic by recent storms is likely to advance prices at Boston immediately, though undoubtedly the scarcity of soft coal and the difficulty of forwarding it may affect the hard coal market. At Philadelphia the demand is reported good. At New York buyers realize that until there is a more manifest attempt on the part of the roads to restrict production, prices will be no better, and they know that it is harder to send prices up than down. Consequently most buying is of the hand-to-mouth order, and prices are to all intents unchanged, though, of course, cold weather breeds confidence. We quote for free burning white ash f. o. b. New York: Broken, $3; egg, $3.15; stove, $3.45@$3.50; chestnut, $3.25. The small sizes are quoted: Pea, $2@$2.25; buckwheat, $1.50@$1.90; rice, $1.30@$1.50.

Notes of the Week.

The Schuylkill Coal Exchange states the drawn to return price of coal to determine the rates of wages to be paid miners in the last half of November and first half of December is $2.27, and the rate of wages will be 8% below the $2.50 basis.

Bituminous.

There is a loud call for soft coal from some points along the Atlantic seaboard which producers cannot satisfy because of the great scarcity of coastwise vessels. Practically all the vessels arriving at the shipping ports are so crippled that they are obliged to be hauled out or go to dry dock for repairs. This lack of vessels is now a serious thing for consumers who are getting into such a precarious condition that some, we understand, are being forced to use fuels that they never used before. As a result exorbitant rates are being offered, and the ocean freight market is booming, with no vessels to accept the offers. Mine owners with season contracts made on a certain average for freight are feeling blue, and transportation companies that have agreed to deliver large tonnages at freight rates far below present figures feel no btter.

In spite of reports to the contrary we understand that nothing has been done yet by the soft coal road presidents that will definitely fix prices for next year. And until there is some report, bargaining over contracts for next year awaits some definite word.

The demand from the far East would be fair if vessels were abundant; with no vessels the call for coal is becoming hysterical. Along the Sound there is also distress in some quarters, and reasonable freight rates would bring heavy shipments. New York harbor trade is fair. The freight scare is not so marked, probably because of its nearness to the shipping ports. All rail trade is little changed, though the outlook is better. Transportation from mines to tide is not up to the mark. Car supply is short, because of the demand from anthracite shippers and the large stocks of soft coal at tide awaiting vessels which do not come.

In the coastwise vessel market freights have been bid up so feverishly by parties who apparently imagine that vessels can be had by simply offering freights out of all reason that we cannot quote current rates from Philadelphia this week. On December 1st $1.10 to $1.25 was offered from Philadelphia to Boston and 10c. higher from the further lower ports. Higher figures are reported and there is no knowing how high rates may go if the feverish bidding continues.

Prices are practically unchanged, and we quote: Clearfield, best grade, $1.65 at Philadelphia, with poorest grades down to $1.20. George's Creek, $1.65 at Baltimore; New River, $1.65 at Newport News; Pocahontas, $1.65 at Norfolk. At New York the best grades the $2.20; poorest, $1.45.

Notes of the Week.

Coal receipts at San Francisco by water in November were 110,183 tons. For the eleven months ending November 30th they were: Eastern, anthracite and Cumberland, 35,990 tons; Washington and Oregon, 565,899 tons; British Columbia, 466,353 tons; Australia, 174,606 tons; Great Britain, 89,320 tons; total, 1,331,168 tons, showing a decrease of 65,474 tons from last year. The November receipts this year were very light.

Birmingham, Ala. Dec. 5.

(From Our Special Correspondent.)

So active is the demand for coal in this district that the coal mines in operation hereabouts are unable to supply the trade. The announcement is made that there is a coal famine on, and when it is given out that certain plants have to run slack on account of not being able to get their full supply of coal, this statement is corroborated. Concerns which use from 10 to 15 cars of coal a day are having some trouble in getting all the fuel they need. Never before was there such an activity in the coal market as now, and a fair price is being received for the product.

The domestic trade, like that with the local demand, is so active that it cannot be supplied as promptly as is desired. The Pioneer Mining and Manufacturing Company is pushing the work on their new mines at North Birmingham. The Tennessee Coal, Iron and Railroad Company and the Sloss Iron and Steel Company are getting out immense quantities of coal, and what is not being used by their own plants, such as furnaces, coke ovens and other industries, is being eagerly sought for by other plants in the district. The Woodward Company is also working its mines hard near Bessemer. In Walker County nearly all of the mines are in full blast. in Tuskaloosa and Bibb counties there is much coal being gotten out. Steady miners are able to find employment almost at any of the mines. At some places agents are now at work keeping the mines well filled with labor.

The steamboat "Resolute," belonging to the Southern Railway, which handles the barge line between Greeneville, Miss., and New Orleans, has returned to Greeneville, after being in dry docks for repairs at New Orleans for some time. There is no coal at Greeneville now, the Walker County mines having as much to do as they can without filling orders for the Mississippi River trade.

Pittsburg. Dec. 8

(From Our Special Correspondent.)

Coal.—The local trade continues very active, with liberal transactions, without any change in prices; the consumption has been large. The river is too low for shipment; the coal men show no anxiety on that account, as prices ruling in the lower market are extremely low. The Central Coal and Coke Company of Ohio has dissolved; it was a combination of coal operators. This company was feared by Pittsburg coal shippers more than any other combination, and frequent efforts were made to get the Pittsburg operators to form a similar combination or to join the Ohio concern. It was this combination which kept the freight rates on coal in Ohio at the low rates. All efforts to have the railroads centering in Pittsburg and carrying coal to the lakes to lower their rates to meet the coal rates of Ohio failed. Now that the Central Company has dissolved it need not be expected that rates will be raised, as the railroad managers are largely interested in the production of Ohio coal.

A new and very extensive coal plant is to be established near Greensburg, Pa., by the Berwind-White Coal Company, owner of big mines at several places; the company purchased 5,200 acres of coal land in Sewickley township.

At Phillipsburg, Pa., the miners' convention in session adopted a resolution that all miners working below the district price or loading coal by the car be notified to suspend work on December 10th, and to remain idle until the district price of 45c. on gross ton is paid.

A convention of miners will be held in the city hall, Pittsburg, beginning second Monday in January, and will continue for one week; more than 1,000 miners are expected to be present. The first business will be the election of national officers. The inter-state convention of the mine operators will begin on the third Tuesday in January at the same place. The Monongahela House, Pittsburg, will be the headquarters of the operators, and the Home Hotel the headquarters of the miners.

Connellsville Coke.—Production fell off last week slightly. Shipments fell off proportionally. The car supply is short at many places. For the week 18,463 ovens, 14,730 were active. Estimated production, 154,574 tons, as compared with 157,323 tons the week previous. Morrell has now only 200 ovens in blast, instead of 350, the rapid exhaustion of coal there having necessitated the blowing out of 150 ovens. Production fell off about 4,000 tons. The shipments show a greater falling off than production. In the running order for the week 3,792 ovens made 6 days; 11,411 ovens made 5 days; 20 ovens 4 days, and 50

ovens, the Semet-Solvay. By-Product plant, 7, an average of 5.24 days, as against 5.42 days the week previous. The Hyler-Frick Company made 6 days at 4 plants and 5 days at all the others. Frick's plants, the McClure Company, made 6 days at one plant and 5 days at all the others. The Cochran plants made an even 5 days at all plants. Dillinger & Son made 5 days at all plants. W. I. Rainey made 5 days at 7 plants. The Independent made 5 days at all the 10 plants in blast. The furnace plants made 6 days at 8 plants. Shipments for the week were as follows: To Pittsburg, 2,862 cars; sent west, 4,515 cars; sent east, 1,423 cars; total, 8,800 cars.

SLATE TRADE REVIEW.

New York. Dec. 9.

The list of prices per square for No. 1 slate, standard brand, f. o. b. at quarries, are given below:

Prices of Roofing Slate.

Size, inches	Monson or Br'n ville.	Bangor.	Bangor Ribbon.	Alb'n, or Jackson Bangor.	Lehigh.	Peach Bottom.	Sea Gr'n.	Unfad'g Green.	Red.
		$	$	$	$	$	$	$	$
28 x 14	.....	....	.....	.....	....	....	2 60	....	....
26 x 24	.....	....	.....	.....	.....	.....	2.60	.....	.....
24 x 16	.....	.....	.....	.....	.....	4.75	.....	.....	.....
24 x 15	.....	.....	.....	.....	.....	4.75	.....	.....	.....
24 x 14	6.10	3.35	3.00	3.00	3.50	4.85	2.50	3.50	.....
24 x 13	.....	.....	.....	.....	.....	4.85	.....	.....	.....
24 x 12	6.60	3.35	3.00	3.00	3.50	5.60	2.60	3.50	.....
24 x 10	.....	.....	.....	.....	.....	5.00	.....	.....	.....
22 x 14	6.10	.....	.....	.....	.....	5.00	2.50	3.50	.....
22 x 13	.....	.....	.....	.....	.....	5.00	.....	.....	.....
22 x 12	6 60	3.50	3.00	3.00	3.00	5.00	2.6	3.50	..
22 x 11	6.50	3.50	3.00	3.00	3.00	5.00	2.75	3.75	.....
20 x 14	6.40	.	.....	.....	.	....	2.50	3.50	.....
20 x 13	.....	.....	.....	.....	.....	5.00	.....	.....	.....
20 x 12	6 90	3.50	3.00	3 60	3.75	5.00	2.60	3.75	.....
20 x 11	6.80	.....	.....	3 25	.....	5.00	2.60	3.75	.....
20 x 10	6 80	4.00	3.25	3.25	3.80	5.10	2.75	4.00	10.50
18 x 18	.....	4.25	.....	.....	.	.....	.....	.....	.....
18 x 14	6.50	.....	.....	.....	.....	.....	.....	.....	.....
18 x 12	6.80	3.50	.....	3.00	....	5.00	2.60	3.50	.....
18 x 11	7.00	.....	.....	.....	.....	5.00	2.50	3.75	.....
18 x 10	7.20	4.00	3.25	3.25	3.80	5.10	2.60	4.00	10.50
18 x 9	7.10	4.00	3.25	3.25	3.80	5.10	2.60	4.00	10.50
16 x 16	7.00	4.25	.....	.....	..	. .	.....	.....	.....
16 x 14	.....	4.25	.....	.....	....	. .	.....	.....	.....
16 x 12	6.80	3.50	....	3.00	.	....	2.50	3.50	.....
16 x 11	6.90	.....	.....	.....	.....	.....	.....	.....	.....
16 x 10	7.10	4 00	3.25	3.25	3.80	5.00	2.50	4.00	10.50
16 x 9	7.00	4 00	.....	3.25	3.80	5.10	2.25	4.00	10.50
16 x 8	7.20	4.00	3.25	3.25	3.80	5.10	2.25	4 00	10.50
14 x 14	7.00	4.25	.....	.....	.....	.....	.....	.....	.....
14 x 12	6.50	.....	.....	.....	.....	.....	2.25	.....	.....
14 x 10	6 60	3.50	3.00	3.00	3 75	....	2.25	3 75	10.50
14 x 9	6.50	.....	.....	.....	3.40	4.85	2.25	3.75	10.50
14 x 8	6 60	3.75	3.10	3.00	3.40	4.85	2.20	4.00	10.50
14 x 7	6.40	3.75	3.10	3.00	3.40	4.85	2.15	4.00	10.50
12 x 10	5.80	3.50	.. .	.....	.....	4.60	2.20	3.25	.....
12 x 9	5.60	.....	.....	.....	.....	4.60	2.15	3.25	.....
12 x 8	5.50	3.00	.....	3.00	3.25	4 60	2.15	3.25	9.00
12 x 7	5.00	3.00	.....	3.00	3.25	4.60	2.15	3.25	9.00
12 x 6	4.80	3.00	....	3 00	3.25	4.60	.....	3.25	8.50
11 x 10	.....	3.50	.....	.....	.....	.....	.....	.....	.....
11 x 8	4.50	.....	.....	.....	.....	.....	.....	.....	.....
11 x 7	4.00	.....	.....	.....	.....	.....	.....	.....	.....
10 x 12	.....	.....	.....	.....	.....	.....	.....	.....	4.50
10 x 11	.....	.....	.....	.....	.....	.....	.....	.....	4.50
10 x 8	4.00	.....	.....	.....	.....	.....	.....	.....	6.50
10 x 7	.....	.....	.....	.....	.....	.....	.....	.....	6.50
10 x 6	.....	.....	.....	.....	.....	.....	.....	.....	6.50
9 x 7	3.50	.....	.....	.....	.....	.....	.....	.....	.....

A square of slate is 100 sq. ft. as laid on the roof.

In Brownville and Monson delivery quotations can be had somewhat lower than above, which is also true of other brands. No. 1 Bangor are 50c. extra when full 3-16 in. thick. Purple sizes run 24 by 12 and 14 by 7, and vary from $3.75 to $4 per square. Variegated and mottled, $2.25@$2.90 per square, according to size. Intermediate sea green, sizes 24 by 14 to 18 by 10, $2.25@2.35; 16 by 12 to 16 by 10, $2.10; 16 by 9 to 14 by 8, $2 per square. Intermediate red, 14 by 7 in. and larger, $6; 12 by 6, 12 by 7 and 12 by 8 in., $5 per square, net.

Roofing.—Building operations have not filled the expectations of quarrymen, who earlier in the year looked for much activity in this quarter. But exports have increased, and this trade has been the redeeming feature of the slate industry. The exports from New York for the first week in December have been less than the previous seven days owing to the heavy movement in other freight. The exports were: To Liverpool, 15 tons and 2 carloads roofing ($465); Hull, 8 carloads ($2,627); Newcastle, 16 carloads ($3,700); Southampton, 94 crates roofing ($400); London, 1 case ($10); Sydney, N. S. W., 145,730 pieces ($3,365); Hamburg, Germany, 40 cases ($108); Cape Town, South Africa, 20 cases ($65); Central America, 36 cases ($111); Laguayra, 8 cases ($45); Montevideo, 49 cases ($345); Demerara, 4 cases ($14); Kingston, 27 cases ($81); total value, $11,336, against $27,129 last week.

Baltimore exported 184 short tons roofing slate to Dublin, and 210 tons to Belfast, Ireland, for the week ending December 1st.

Prices are not strong and continue in buyers' favor.

Shipments from Slatington and Walnutport, Pa., for the eleven months of this year were 185,750 squares of roofing slate, which is about 5,000 squares more than for the whole of 1897, and nearly 15,000 squares more than the previous year. The movement from Danielsville, Pa., during the week ending December 1st included 250 squares roofing slate.

Mill Stock.—Home consumption continues quiet, while efforts are being made to increase export trade. Prices, however, have been very low, and in many cases producers have made comparatively little money this year. In Pennsylvania the Washington Slate Company, of Slatington, Pa., intends to erect a new blackboard and mantel factory at its quarries, and expects to utilize the rubbish slate. The shipments of blackboards from Slatington and Walnutport for the week ending December 1st have been good, while school slates have fallen off. Marbleized slate moves rather quietly.

CHEMICALS AND MINERALS.

(For current prices of chemicals, minerals and rare elements, see also page 720.)

New York. Dec. 9.

Heavy Chemicals.—The supply of alkali in the local market is somewhat short, and domestic makers are well sold ahead, hence prices are firmly held. In domestic caustic soda a large business has recently been done at 1.37½c., but makers are now holding out for 1.40c. f. o. b. works. Crystal carbonate has been in good demand for next month's delivery. Chlorate of potash of home manufacture is still unsettled and sales are reported at 8⅞c., while the foreign article is firmer.

Bleaching powder continues to be looked for 1899 delivery at less than present market quotations. Imports included 219 casks and 48 bbls. bleaching powder; 500 bags and 64 casks carb. soda ash, 100 drums caustic soda, 22 bbls. alkali, 10 kegs chlorate of potash, and 50 kegs bicarb. soda. Receipts of domestic goods included 380 sacks and 200 kegs soda ash, and 29 bbls. potash. Among the exports were 127 bbls. soda ash and 40 kegs bicarb. soda for Adelaide, and 415 pkgs. bicarb. soda for Sydney, New South Wales.

Quotations are: Caustic soda, domestic 60%, $1.50 per 100 lbs.; 70@74%, $1.40; 76%, $1.50; all f. o. b. works; $1.55@$1.65 delivered. Foreign caustic soda, high test, $1.60@$1.70 delivered, according to test and quality. Powdered caustic soda, 2¾@3c. per lb. for large lots, and ¼c. more for smaller quantities, according to make and test. Alkali, domestic, 55@60c. f. o. b. works; 65@70c. delivered; foreign, B. & M., 70@75c. Bleaching powder, English prime brands, $1.50@$1.65 per 100 lbs.; other brands, $1.40@$1.50; Continental F. prime, $1.50@$1.65. Bicarb. soda, domestic ordinary, $1.15@$1.25 per 100 lbs. f. o. b. works. Natrona brand, $1.65; "Arm and Hammer" brand, $3.25@$3.50, less the usual discount; foreign, $2.12½@$2.25 per 100 lbs., according to brand and style of package. Sal soda, domestic, 55@60c. per 100 lbs. f. o. b. works, less the usual discounts; English, 62½@65c. per 100 lbs. Concentrated sal soda, foreign (crystal carbonate), $1.60@$1.65 per 100 lbs.; domestic (monohydrate crystals, $1.25@$1.30 per 100 lbs; "snowflake," $1@$1.12½, f. o. b. Syracuse. Chlorate of potash, crystals, 9@ 9¼c.; powdered, 9¼@9½c. per lb. for large lots.

Acids.—Spot business is only fair, while for next year's delivery a few more contracts have been booked. Oxalic acid has been reduced by the syndicate to 6¼c.; thus the jobbers who have bought heavily at 6½c. early in the year are now in a predicament, as they have not yet disposed of their holdings. Imports this week have been light, only 55 casks. Blue vitriol is steady, and the declining ocean freights have stimulated exports, Venice, Italy, alone taking 179 bags.

Quotations per 100 lbs., New York and vicinity, are as follows: Acetic acid, commercial, No. 8, $1.30@$1.40; muriatic acid, 18°, $1.10 for drums and $1.15@$1.75 for carboys; 20°, $1.20@$1.87½; 22°, $1.35@$2.25, according to quantity and brand. Nitric acid, 36°, $3.50@$4.75; 38°, $3.75@$4.62½; 40°, $4@$4.87½; 42°, $4.62½@$5.25. Oxalic acid, $6.50@$6.75. Mixed acids, according to mixture. Sulphuric acid, 66°, $1.10 ror drums and $1.15@$1.75 for carboys. Chamber acid, 50°, in a jobbing way, $11.50@$12 per ton f. o. b. factory. Blue vitriol (copper sulphate), $3.75 per 100 lbs. for best grades.

Brimstone.—The market has eased off on the arrival of 2,400 tons, and spot best unmixed seconds can doubtless be had at $21 per ton, while futures are obtainable at $19.50@$20 per ton. Thirds are nominal at $18.50@$19. The shipments of brimstone from Sicily to the United States in November are reported by Parsons & Petit at 7,300 tons, being 4,500 tons for New York, and 2,800 tons for Portland, Me. In October 9,400 tons went to New York, 1,700 tons to Portland, and 500 tons to Montreal, Canada; total, 11,600, or 4,300 tons more than in November.

Pyrites.—Arrivals this week were 3,415 tons iron pyrites from Pilley's Island, and 5,831 tons copper pyrites from Huelva, Spain, the latter being imported by the Pennsylvania Salt Manufacturing Company. A charter has been taken abroad of a British steamer of 1,408 tons to carry ore from Huelva to north of Hatteras early in December at 9s. freight.

Spanish pyrites contain from 46% to 51% sulphur, the American from 42% to 44%, and Pilley's Island, N. F., about 50%. Quotations are: American lump ores (basis 52%), $3.25 per long ton f. o. b. mines, Mineral City, Va.; $5 per long ton f. o. b. mines, Charlemont, Mass., and $6.50 per long ton for Pilley's Island, delivered in New York. Fines are $2.75 per long ton, f. o. b. Mineral City, Va.; $4.25 at Charlemont, Mass., and $4.50 for Pilley's Island, delivered in New York. Spanish pyrites, 10@13c. per unit, according to percentage, delivered ex-ship New York and other Atlantic coast ports.

Nitrate of Soda.—The market rules firm notwithstanding the arrival of 12,184 bags at this port. The British bark "La Escocesa," which was overdue from Iquique with 2,000 tons nitrate of soda, has recently been towed into port by the British steamship "Marstonmoor." This cargo has already been contracted for and will go directly into consumption. Spot nitrate of soda is quoted at $1.57½@$1.60, and shipments about the same.

Messrs. Mortimer & Wisner, in their monthly statement of nitrate of soda, dated New York, December 1st, give the following statistics:

	1898.	1897.	1896.
	Bags.	Bags.	Bags.
Imp. into Atlantic ports from West Coast S. A. from Jan. 1st to date	903,638	568,153	807,588
Imp. into Atlantic ports from Europe from Jan. 1st	55,171	.....	....
	958,809	568,153	807,588
Stock in store and afloat Dec. 1st in New York	44,617	37,295	128,528
Boston	.....	.....	17,685
Philadelphia	.....	1,332	.....
Baltimore	2,000	1,000	6,000
Norfolk, Va	.....	.....	.....
Charleston	.....	.....	.....
To arrive, due Mar. 15th '99	200,000	215,000	180,000
Vis. supply to Mar. 15th '99	246,617	254,627	326,813
Stock on hand Jan. 1st	15,383	123,593	53,839
Deliveries past month	155,471	79,855	62,911
" from Jan. 1st to date	927,575	652,119	714,614
Total yearly deliveries	.....	710,971	746,264
Prices current Dec. 1st	1.55@1.57½	1.62½	1.87½

Fertilizing Chemicals.—Leading ammoniates in sympathy with the low price of cotton are in limited demand in the south. Sulphate of ammonia is firm. The wrecking of fishing schooners with their cargoes in the recent storm has lessened the supply of fish scrap, but as yet the market has not been materially affected. The production of fertilizers in the South is likely to increase next season, as several of the works are to be enlarged. Our export trade is considerably better than last year and continues to increase, while our imports diminish. Of the imports this week we note 1,999 bags double manure salt, 16,325 bags muriate of potash, 3,720 bags sulphate of potash and 800 tons kainit.

Quotations are: Sulphate of ammonia, gas liquor, $2.62½@$2.65 (basis 25%). Bone, $2.52½@$2.55 per 100 lbs. Dried blood, high grade Western, $1.77½@$1.80 per unit; New York, $1.65@$1.70 per unit. Azotine, $1.70@$1.75, basis New York. Concentrated phosphates (30% available phosphoric acid), 57½c. per unit. Acid phosphates, 13@15%, av. P_2O_5, 60@65c. per unit at sellers' works in bulk. Dissolved bone black, 17@18%, P_2O_5, $16@$16.50 per ton. Acidulated fish scrap, $10@$10½; dried $19 f. o. b. fish factory. Ammonia superphosphates, high grades, $25@$26 per ton. Tankage, high grade, $15@$16 per ton f. o. b Chicago, $18.50@$19 at New York. Concentrated tankage, $1.45@$1.50 per unit f. o. b. Chicago; low grade, $13@$13.50 per ton. Bone tankage, $19.50@$20.50; ground bone, $24@$24.50 delivered. Bone meal, $1.40@$1.50 f. o. b. Chicago.

Phosphates.—The coastwise market is fairly active, while the export trade has been good. The shipments of high grade Florida phosphate rock from Savannah, Ga., in November are reported by J. M. Lang & Co., at 2,212 tons, of which 1,207 tons went to Genoa, Italy, and 1,005 tons to Bremen, Germany. The shipments from Punta Gorda, Fla., in October and November, are reported by the Charlotte Harbor Lighterage and Stevedore Company at 2,910 tons to foreign ports, and 5,673 tons to domestic, making a total for the eleven months this year of 24,238 tons foreign and 39,356 tons domestic; all by the Peace River Phosphate Mining Company. The movement of phosphates from Tennessee in October amounted to 30,205 short tons. Miners at Mt. Pleasant and in Hickman County look for better prices after January 1st next. The shipments of phosphate rock from Charleston, S. C., from September 1st to November 25th amounted to 30,351 tons, or 11,390 tons more than at the same time last year. Charters noted this week are a British steamer of 1,248 tons from Tampa to Ghent at 20s., Janu-

ary-February sailing; British bark "Lord Wolseley," 2,518 tons from Tampa to Yokohama, at 50s., and a British steamer of 1,304 tons from Tampa to the United Kingdom or Continent at private terms. There have also been several schooners chartered for the coastwise market. We note 4,000 bags of phosphates were imported at New York from Antwerp, Belgium.

Quotations at New York are: Florida high grade, 75@80% rock, $8.25@$8.50 per long ton f. o. b. Fernandina. The freight rate to New York is about $1.80 per ton. Florida land pebble, 68@73%, quoted at $5.25@$6 per ton, delivered in New York. South Carolina ground rock is worth $5.50 to $5.75 per short ton, delivered in New York; undried, $3 per 2,240 lbs. f. o. b. Ashley River; hot air-dried, $3.25@$3.45 f. o. b. same place. Tennessee phosphates, $2.20@$2.30 f. o. b. Mt. Pleasant, according to quality.

Nitrate of Silver.—Competition has brought prices down to 40c. an oz. for lots of 1,000 oz. and 41½c. for smaller quantities. This is a reduction of 1c. per oz.

Liverpool. Nov. 30.

(Special Report of Joseph P. Brunner & Co.)

The market for chemicals is dull and uninteresting. Soda ash is in moderate request, while quotations vary considerably according to market, the maximum range for tierces being about as follows: Leblanc ash, 48%, £4 5s.@£4 10s.; 58%, £4 10s.@£4 15s. per ton net cash; ammonia ash, 48%, £4@£4 2s. 6d.; 58%, £4 5s.@£4 7s. 6d. per ton net cash. Bags are 5s per ton under price for tierces. Soda crystals are unchanged at £2 17s. 6d. per ton, less 5% being quoted for barrels, although lower figures are taken for certain special quarters. Bags are 7s. per ton under price for barrels. Caustic soda is difficult to move, and easier, spot range being about as follows: 60%, £5 15s. @£6; 70%, £6 15s.@£7; 74%, £7 5s.@£7 7s. 6d.; 76%, £7 10s.@£7 12s. 6d. per ton net cash. Bleaching powder is dull at nominally £5 2s. 6d.@£5 5s. per t n, net cash for unbarred makes of hardwood, but there is little doing. Chlorate of potash is in retail demand, and 3¾d. per lb. is about nominal spot quotations. Bicarb. soda is quiet, while prices vary as to destination from £5 5s.@£6 15s. per ton, less 2½% for the finest quality in 1 cwt. kegs, with usual allowances for larger packages. Sulphate of ammonia is firmer at about £10 6s. 3d.@£10 8s. 9d. per ton, less 2½% for good gray, 24@25% in double bags f. o. b. here. Nitrate of soda is quiet at £7 17s. 6d.@£8 per ton, less 2½% for double bags f. o. b. here, as to quality. Carb. ammonia lump, 2¾@2⅞d per lb.; powdered, 3@ 3⅛d. per lb., less 2½%.

Valparaiso. Oct. 8.

(Special Report of Jackson Brothers.)

Nitrate of Soda.—During the first part of the fortnight the business done in this article was very desultory, and it was only after producers lowered their limits, that several parcels of 95%, principally late December delivery, were placed on the basis of 4s. 8½d. The difficulty in reference to the perchlorate clause for deliveries during 1899, has not been overcome; but it is reported that a commission has been named to study the matter. The projected combination has been officially announced as having collapsed, owing to the peremptory refusal of one producer to adhere to the plan. The production during September was 2,329,000 qtls., making a total of 20,641,000 qtls. for the first 9 months of this year. We quote 95% November-December, 4s. 8½d., and 96%, 4s. 10d., both sellers. The price of 4s. 8½d., with 31s. 3d. all round freight, stands in 6s. 9½d. per cwt. net, cost and freight, without purchasing commission. Sales during the fortnight were 339,000 qtls.

IRON MARKET REVIEW.

NEW YORK, Dec. 9, 1898.

Pig Iron Production and Furnaces in Blast.

uel used	Week ending Dec. 10, 1897. F'ces	Tons.	Week ending Dec. 9, 1898. F'ces.	Tons.	From Jan., '97. Tons.	From Jan., '98. Tons.
An' racite	28	18,050	28	21,150	823 456	1,072,470
Coke.....	144	203,200	148	203,350	7,984,690	9,595,799
Charcoal.	19	5,200	20	6,125	230,945	290,471
Totals..	191	226,450	196	230,625	9,039,091	10,958,740

The waiting season in the iron market is at an end, apparently, and the trade has shown an activity unusual at this season. The heavy rail contracts recorded last week naturally led to expectations of a demand for Bessemer pig, and our Pittsburg correspondent reports sales this week of no less than 147,000 tons for 1899 delivery at a price of $10 per ton at furnaces in the Mahoning and Shenango Valleys—equivalent to about $10.50 at Pittsburg. This seems to set the price for at least the first quarter of the coming year.

There have also been very large sales of billets at about $15.50 in Pittsburg. The wire people have begun to buy on a large scale, and heavy transactions in rods are reported, either concluded or under negotiation. The car builders continue to buy bars on a good scale, and a steady demand from that quarter is looked for.

The big orders for plates for the West Australian pipe line contract have been placed, it is understood, and will furnish the fortunate mills with a lot of work.

In structural material some bridge contracts have been concluded, and other bridge and building orders are under discussion. The mills generally are feeling confident of plenty of work to come, and are already talking of higher prices.

Export trade continues good, and will be assisted by a weakening of rates of ocean freight as the rush of grain shipments begins to slacken.

There is a report that the Federal Steel Company has secured control of the important works of the Cambria Iron Company at Johnstown, Pa. This has been done, it is said, largely by the purchase of rights to take the stock of the new company, which is to operate the works.

Birmingham, Ala. Dec. 5.

(From Our Special Correspondent.)

The principal feature of the pig iron market in this district is the export trade. The shipments from this district continue heavy, and the railroads are slow in furnishing all the cars that are demanded for the prompt movements. It is stated that the old quotations, No. 1 foundry, at $7.75 per ton, are still in force, with no prospects for an early advance, though it is believed that as soon as the stocks of iron in the warrant yards have been reduced more, that the furnacemen will ask for a stiffer price.

It is stated here that orders have been offered at present prices to be delivered next fall, and that the furnacemen refused them. The larger furnace companies are said to be running out of iron in their yards, and are beginning to load daily from their stock houses. The work of repairing furnace No. 1, at Oxmoor, is being rushed, and it is expected to have same completed in four weeks time. There are no doubts about it being put in blast. The Sloss Iron and Steel Company has three of their four furnaces at North Birmingham and in the city in blast. There are two furnaces in blast at Sheffield. The Pioneer Mining and Manufacturing Company has the two furnaces at Thomas, Ala., in blast, and the Woodward Iron Company has the furnace in blast at Woodward. Repair work is being done on two or three furnaces, and if the present conditions continue they will have to be put in blast.

The following are the quotations being publicly given for the product: No. 1 foundry, $7.75; No. 2, $7.50; No. 3, $7.25; gray forge, $6.50; No. 1 soft, $7.75; No. 2, $7.50. Some of these prices are said to be lower than is being accepted for the product on new orders. The miners' committee, which examined the sales books and ledgers of the Tennessee Coal, Iron and Railroad Company on Saturday last, make a report that No. 1 foundry iron did not net $7.60, that is averaging the prices of all grades, and therefore the price of coal mining will remain the same as it has been during the past month.

The finished iron market is also very active. The biggest surprise in finished iron affairs in this district during the past week was the filing of a deed of assignment by the Birmingham Rolling Mills Company. This action was taken after a meeting of the company on last Monday and Tuesday. There have been several moves made in the matter in the several courts hereabout, but the mill is still in full blast. The assignment created excitement in the city. A meeting of stockholders is to be held at Louisville, Ky., to-morrow, and the local holders of preferred stock will be represented there. This assignmnt is said to be the result of the carrying of a large debt for years. The works have been running steadily for the last 16 months and longer, and some good profits have been obtained. There is but little fear expressed as to the mills, which are the largest south of the Ohio, being kept in blast. So far, but few turns have been lost in any of the departments, except in the forges, where a scarcity of coal caused a temporary shutdown, lasting a day or two. It is stated that stockholders in the East, among them Hetty Green, became dissatisfied, causing an uneasy feeling, resulting in the above action being taken.

At the various foundries and machine shops there is plenty of work. The Birmingham Machine and Foundry Company received during the past week a good contract from the steel plant at Ensley City.

Buffalo, N. Y. Dec. 7.

(Special Report of Rogers, Brown & Co.)

Both the market and the situation, as a whole, in this district, are gathering strength. In spite of its being the season when deliveries are expected to be slack, there is a continued and increasing pressure from consumers to have deliveries kept up on their contracts, and in many cases to have specifications anticipated. Some large sales have been made during the past week, and the prospect grows brighter from the seller's standpoint as the season progresses. We seller's standpoint as the season progresses. We quote below for cash f. o. b. cars Buffalo: No. 1 strong foundry coke iron, Lake Superior ore, $11.50; No. 2 strong foundry coke iron, Lake Superior ore, $10.75; Ohio strong softener No. 1, $11.50; Ohio strong softener No. 2, $10.75; Jackson County silvery No. 1, $14; Southern soft No. 1, $12; Southern soft No. 2, $11.75; Lake Superior charcoal, $12@$12.50; coke malleable, $11.

Cleveland, O. Dec. 7.

(From Our Special Correspondent.)

Iron Ore.—There was a demand for certain classes of ores during the past week which could not be supplied, which accounts for the fact that not as much ore was disposed of as could have been. A few small sales of ore have been reported, and it is said by the agents of the mining companies that practically all the ore which was brought down this season from the upper lake regions has been disposed of. This statement is especially true of the non-Bessemer varieties. The agents of the ore companies do not feel that conditions would justify them in landing large amounts of any variety of ore at the lower lake ports on account of the high lake freight rates, unless they were sure of a demand of such strength as would allow them to sell at figures covering the additional cost of transportation. Some of the agents, however, feel at the present time, that if they had had the courage to make the attempt they could have disposed of considerably more ore of the non-Bessemer varieties, as the demand for that class of ore is now somewhat stronger than it has been for several months. The rate from Escanaba is now 70 cents per ton. The following are the prices for ore: Specular and magnetic ores, Bessemer quality, $3.25@ $3.65; specular and magnetic ores, non-Bessemer quality, $2.50@$2.75; hematite ores, Bessemer quality, $2.55@$3.25; hematite ores, non-Bessemer quality, $2.10@$2.25.

Pig Iron.—The general condition of the market is satisfactory, notwithstanding the fact that there have been only a few sales made during the past week. The metal consumption continues large, and the indications are that the demand will be heavy about the beginning of the next year. Although the tendency is toward higher prices, the quotations remain the same, as follows, f. o. b., Cleveland: Lake Superior charcoal, $11.75; Bessemer, $10.75@$11; No. 1 foundry, $10.65$10.75; No. 2, $10.25@$10.50; No. 1 Ohio Scotch, $10.75@$11; No. 2, $10.25@ $10.50; gray forge, $9.50@$9.75.

Pittsburg. Dec. 8.

(From Our Special Correspondent.)

Business continues active, with a firm market and prices on the up grade; there was a liberal advance in Bessemer in this market on Bessemer Pittsburg prices reached $10.50. Valley sales, $10, including 25,000 tons deliverable the first quarter in the new year. The Bessemer sales the past five weeks reached 185,700 tons; increase over the same time last year 50,000 tons. Sales of all kinds for November to December were 345,710 tons; increase over number last year 80,195 tons. Pig iron is the strong feature of the market at the present time. The demand is very heavy, and, while exceptionally law, prices are met with once in a while, the general tendency is toward a further advance. American pig metal is wanted in most parts of the world. Production in Europe is at the highest limits ever reached, yet they have not only lost the export to this country of tin plates and other specialties amounting to 500,000 tons a year, but they have actually imported during the first nine months of 1898 over 600,000 tons from us; yet in spite of such an extraordinary reversal of things, prices have steadily advanced. This is not in any degree due to speculation, but to a positive exhaustion of resources and to an unprecedented absorption of material due to causes too well known to need specifying in detail. With such an object lesson plainly in sight, and with a steady decrease in our stocks of iron is there not a probability of a turn in prices, which may take everybody by surprise?

Finished Material.—The market during the week has undergone no change; mills all seem to be doing very well and are still running full; the season has been a very favorable one, while the outlook for next year is very favorable.

Wrought Iron and Steel Pipe.—Plants in this city and vicinity are well supplied with orders and are all running to their full capacity. Such activity is altogether unusual for December; prices are firm, but unchanged.

Muck Bar.—Market steady, with an increased demand. Sales last week, 5,000 tons, $18.25@ $18.50.

Ferro Manganese.—Sales show an increase; prices being steady at $50 for imported 80% delivered.

Wire Nails.—The market ruled dull; prices weak and irregular; no improvement is looked for the present year. Prices unchanged, $1.25 in large lots; $1.30@$1.35 in limited amounts.

Sheet Bars—In fair demand at unchanged prices.

Scrap and Old Rails—Are in good demand; prices have been uniform for some time.

Latest.—Parties who have followed the remarks of your Pittsburg correspondent will not be astonished at what follows, a record breaker: 147,000 tons standard Bessemer sold by associated Valley furnaces, Pittsburg for shipment, January to July, 1899, at $10 f. o. b. furnace.

Sales have also been made of 1,000 tons, January Valley furnace, $10.10 cash. Prices are on the up grade. Sales of 2,000-ton mill iron Valley for $9.25 cash, December and January. Bessemer advanced at Pittsburg to $10.55. Sheet billets advance to $16. Muck bar to $18.85. Sheet bars to $16.80. Wire rods, $22. Mill iron, Pittsburg, $10.40. The market is excited; it looks like higher prices.

COKE SMELTED LAKE AND NATIVE ORE.

Tons.	Cash.
15,000 B., J., F., M., V.	$10.00
10,000 B., J., F., M., P.	10.50
7,500 B., D., J., V.	9.85
5,000 B., F., M., V.	9.85
5,000 B., J., V.	9.80
4,000 B, J, F., V.	9 85
4,000 B., J., V.	9.80
3 000 B., J., F., P.	10.55
1,500 B., D., J., P.	10.45
1,500 B., D., P.	10.25
1,500 Mill Iron, D., V.	8.90
1,000 B., J., F., P	10 25
1,000 Mill Iron, D., P.	9.30
1,000 B., J., V.	10.10
1,000 M. I'n, J., F., M., V.	9.25
500 Mill Iron, D., P.	9.35
500 B., D., P.	10.35
500 B., D., P.	10.40
250 Mill Iron, P.	9.25
250 B., P.	10.40
50 No. 2 F'dry, P.	10 25
50 No. 1 F'dry, P.	10.75
50 No. 2 F'dry, P	10.30

BLOOMS, BILLETS, SLABS.

5,000 Blts., Deliv., P.	$16.00
3,000 Blts., Deliv., P.	15.65
3,000 Blts., Deliv., P.	15.70
1,400 Blts., Deliv., P.	15.90

SHEET BARS.

2,000 J., F., M., P.	$16.75
800 Delivered, P.	16.75
500 Delivered, P.	16.70
300 Delivered, P.	16.50

MUCK BAR.

3,000 Neutral, D., P.	$18.85
1,500 Neutral, D., P.	18.50
500 Neutral, Del., P.	18.65

BLOOMS, BILLETS, BAR ENDS.

Tons	Cash.
500 Blt. Ends, P.	$10.75

STEEL WIRE RODS.

1,000 Delivered, P.	$22.00

SKELP IRON.

1,850 W. Gr'd, P.	$1.22½ 4 m.
850 N. Gr'd, P.	1.22½ 4 m.
800 Sheared, P.	$1.30 4 m.

SKELP STEEL.

1,500 Sheared, P.	$1.10 4 m
500 W. Gr'd, P.	1.00 4 m
500 N. Gr'd, P.	1.00 4 m

FERRO-MANGANESE.

85 80%, imp. dlv'd, P.	$50.00
50 80%, imp. dlv'd, P.	50 00
50 80%, imp. dlv.d, P.	50.00

CHARCOAL.

50 No. 2 F'dry, P.	$15.00
50 No. 3 F'dry, P.	15.00
50 Cold Blast, P.	2 .00

RAIL AND TANK SUPPLIES.

50,000 Links and Pins,	$1.30
Track Bolts, Hex.	1.65
Spikes, Penn. S'd	1.60
All f. o. b Pittsburg.	

OLD RAIL AND SCRAP.

1,000 Iron Rails, gr., V.	$13 75
600 Steel Rails, gr., P.	10.00
500 Steel Rails, gr., P.	10.00
400 Bu. Steel, net, P.	9.00
300 No. 1 C. S., gr. P.	9.00
300 Wr't t'ngs, net, P	6.75
300 H. M. Steel, gr., P.	19.35
200 Wr't Scrap, nt., V.	11.50
200 Cast B ngs, net, P.	5.75
200 Wr't T'ngs, net, P.	7.50
100 Axles, net, P.	17.00

Philadelphia. Dec. 9.

(From Our Special Correspondent.)

Pig Iron.—At last what appears to be a genuine hardening tendency in pig iron has set in. Less iron is selling at minimum figures. Our brokers and furnace agents have lost the reserve that has characterized their conversation on the market, and they now speak with evident confidence of more satisfactory conditions and some few even predict stronger prices early in the new year. Large purchases have been quietly made for next year's requirements. The larger movement is bringing in some buyers who are influenced by the action of others. A long and steady demand is assured because of the volume of new business coming in. To-day's quotations are as follows: No. 1 X foundry, $11.75@$12.25; No. 2 X foundry, $11@$11.25; No. 2 plain, $10.75; standard mill iron, $10.25@$10.50; ordinary mill iron, $10; basic, $10@$10.25; Bessemer, $12@$12.50; low phosphorus, $16.50@$17.

Billets.—Instead of a decline to $17, as has been expected, the indirect effect of large steel rail dealings and large buying of Bessemer and other pig has been to make $17.50 the ruling quotation to-day. Mill men have been making careful investigation, and as a consequence are not crowding their production on buyers.

Merchant Bars.—Even with the approach of the holidays a good business is noted, and it is due to the fact that large car building requirements have been covered and small buyers have bought more than usual. Common, 1.05c.; refined, 1.10@1.15c.; soft steel, 1.15@1.20c.; high grade, 1.25@1.30c.

Sheets.—The week's business shows nothing deserving of comment. No. 10, 1.40@1.50c.; No 28, 2.40@2.50c.

Pipes and Tubes.—Heavy orders have been placed in outside markets, our mill men say, and they are feeling the advantage of this in less competition and somewhat better prices. There is some business coming in and agents are on the track of much more for January.

Merchant Steel.—The agents think that some large consumers who got bottom figures recently on large supplies will hold off until after January, as they are assured there will be no advance then.

Plates.—The enormous business done in Western Pennsylvania is being felt here in firm prices on the large amount of small orders that are coming to us. The consumers are very quick to place orders now, because of the possibility of an advance and the desire to have iron when they want it. Ordinary plates and universals, 1.30@1.35c.; flange, 1.50@1.60c.; firebox, 1.75@2.50c.

Structural Material.—Angles, 1.25@1.35c.; beams and channels, 1.40@1.50c. There is nothing new to report.

Steel Rails.—Three large sales have been made by Pennsylvania mills, and there are negotiations now going through which will probably add orders for about 80,000 tons to the engagements already made. Quotations, $17@$18. There are rumors of a cutting on these figures at one of two storm centers of competition.

Old Rails.—There is enough inquiry for old iron rails to make prices firm at $12.75@$13.25, though there is not much business heard of.

Scrap.—Heavy scrap is being sought after by scrap dealers everywhere; the result is a hardening in prices. Prospects are favorable for large transactions at an early day.

New York. Dec. 9.

The local iron market remains quiet, with light buying. Dealers are beginning to take account of stock, and consequently business is not likely to show much improvement until the middle of next month. In foreign trade we note shipments to London of $25,000 worth of small wares, good orders from Germany for machinery and tools, and orders for sugar machinery from Cuba and Costa Rica.

Pig Iron.—There is an evident desire among furnaces to get higher prices, and Alabama furnaces have advanced prices 25c. per ton. Little business has been done here at the higher quotations. We quote: Northern brands, tidewater delivery: No. 1 X foundry, $11.25@$11.50; No. 2 X foundry, $10.50@$11; No. 2 plain, $10.25@$10.50; gray forge, $9.75@$10.25. Southern brands, New York delivery: No. 1 foundry, $11.25@$11.50; No. 2 foundry, $10.75@$11; No. 1 soft, $11@$11.25 No. 2 soft, $10.75@$11; No. 3, $10.50@$10.75; basic, $10.50@$10.75.

Bar Iron and Steel.—The demand is weaker than it has been, but prices are well maintained. We continue to quote for large lots on dock: Common, 1.05@1.10c.; refined, 1.15c. Soft steel bars, 1.10@1.20c.

Plates.—The award of the Coolgardie pipe job contracts is an object of interest. Several are about closed, but particulars are not made public yet. The New York market is quiet. Eastern mills are advancing prices, but we quote: For sheared plates at tidewater, in large lots: Tank, ¼-in. and heavier, 1.25@1.30c.; 3.16-in., 1.35@1.40c.; Nos. 8, 9 and 10, 1.45@1.50c. Shell is as high as 1.35@1.40c.; flange, 1.45@1.55c.; marine, 1.60c.; firebox, 1.65@1.70c. Universals are 1.30c.; charcoal iron plates, 2.25c. for shell, 3.75c. for flange, and 3.25c. for firebox. Rivets are 2.25c. for iron, and 1.75@1.85c. for steel.

Structural Material.—No large contracts have been reported recently. The past year has seen less construction than 1897. Prospects for 1899 are better. We quote for large lots at tidewater: Beams, 15-in., 1.35@1.45c.; angles, 1.25@1.30c.; tees, 1.45@1.50c.; channels, 1.40@1.50c.

Old Material.—Scrap continues in steady demand. Quotations are: Old steel rails, $3.75; old iron rails, $11; old car wheels, $10; axles, $15@$16; wrought iron scrap, $10; machinery cast, $9.50; borings, $5; turnings, $6; burnt iron, $5.25; all New York deliveries.

Nails.—The demand is moderate. We quote for large lots on dock: Cut nails, $1.30; wire nails, $1.40.

METAL MARKET.

NEW YORK, Dec. 9, 1898

Gold and Silver.

Gold and Silver Exports and Imports

At all United States ports, October and year from Jan. 1.

	October.		Ten Months	
	1897.	1898.	1897.	1898
GOLD.				
Exports	$313,311	$1,279,926	$32,998,892	$14,061,849
Imports	11,775,183	16,227,358	28,386,318	143 658.095
Excess	I. $11,462,172	I. $14,947,432	E. $4,612,574	I$129,596.246
SILVER.				
Exports	5,225,437	4,572,827	47,832,111	34,946,327
Imports	3,283,433	2,532,797	27,161,680	24,924,164
Excess	E. $1,942,014	E. $1,980.030	E $20,667,431	E. $10,022,163

This statement includes the exports and imports at all United States ports, the figures being furnished by the Bureau of Statistics of the Treasury Department.

Gold and Silver Exports and Imports, New York

For the week ending Dec. 9th. 1898, and for years from January 1st. 1898. 1897, 1896, 1895.

Period	Gold.		Silver.		Total Excess, Exp. or Imp.
	Exports.	Imports.	Exports	Imports	
We'k	$631,571	$916,467	$912,240	$27,640	E. $599,704
1898..	8,433,594	96,853,233	32,1'2,703	3,0'8,125	I. 59,255,061
1897..	29,761,631	43,170,454	14,214,685	2,961,722	I. 2,155,860
1896..	40,763,863	76,616,228	35,424,489	3,589,820	I. 4 017,696
1895	66,006,652	28,5'9,947	36,160,788	1,592,342	E. 72,065,151

Exports of gold were chiefly to the West Indies; of silver to London. Imports of gold were from Europe; of silver from Central America.

The United States assay office in New York reports the total receipts of silver at 78,000 oz. for the week.

Financial Notes of the Week.

Trade continues a little unsettled still, and there is some hesitation about new enterprises, though the prospects are improving in various directions. The iron trade especially is developing a good deal of activity. The continued uneasiness abroad and the high rates for money in Europe have prevented further gold imports, and the movement is again postponed.

The opening of Congress at Washington on Monday was very quiet. In fact, not much is looked for at this short session, except the passage of the appropriation bills. The President's message was chiefly devoted to war topics. The only reference to currency was a renewal of his former recommendation for a special gold reserve for the redemption of legal tender notes.

The silver market has been quiet, with business done at slightly declining rates. It is to be noted, however, that the rates for spot and future have been converging, so that March silver has commanded a price only ⅛d. under metal for prompt shipment.

The statement of the United States Treasury on Thursday, December 8th, shows balances in excess of outstanding certificates as below, comparison being made with the statement for the corresponding date last week:

	Dec. 1.	Dec. 8.		Changes.
Gold	$241,663,443	$244,088,719	I.	$2,425,276
Silver	6,733,441	6,842,551	I.	109,110
Legal tenders	14,754,970	14,972,531	I.	217,561
Treas. notes, &c.	1,411,798	1,057,619	D.	354,179
Totals	$264,563,652	$266,961,420	I.	$2,397,768

Treasury deposits with national banks amounted to $96,389,061, an increase of $1,748,060 during the week.

The statement of the New York banks—including the 66 banks represented in the Clearing House—for the week ending December 3d gives the following totals, comparison being made with the corresponding weeks in 1897 and 1896:

	1896.	1897.	1898.
Loans and discounts	$472,441,800	$597,744,000	$697,747,400
Deposits	502,046,000	666,278,600	789,525,800
Circulation	19,997,700	15,916,000	16,439,200
Reserve:			
Specie	75,676,900	104,489,800	158,462,300
Legal tenders	82,299,000	84,202,800	56,017,100
Total reserve	$157,975,900	$188,692,600	$214,479,400
Legal requirement	125,511,500	166,569,650	197,381,450
Balance surplus	$32,464,400	$22,122,950	$17,097,950

Changes for the week this year were increases of $6,327,600 in loans and discounts, $6,796,500 in deposits, $108,300 in circulation, and $458,700 in legal tenders; decreases of $19,200 in specie and $1,259,625 in surplus reserve.

The following table shows the specie holdings of the leading banks of the world at the latest dates covered by their reports. The amounts are reduced to dollars, and comparison is made with the holdings of the corresponding dates last year:

Banks.	1897. Gold.	1897. Silver.	1898. Gold.	1898. Silver.
N. Y. Asso.	$104,489,800	.....	$158,462,300	.....
England	160,885,570	.....	156,253,715	.....
France	392,763,725	$241,893,991	365,901,900	$242,397,400
Germany	143,555,000	73,955,000	128,790,000	66,350,000
Aus.-Hun.	190,989,000	61,95.,000	177,960,000	62,335,000
Spain	46,165,000	55,250,000	55,310,000	32,285,000
Belgium	13,706,655	6,853,335	14,660,000	7,330,000
Netherlands	13,145,000	33,680,000	21,575,000	33,470,000
Italy	79,250,000	11,315,000	74,450,000	11,465,000
Russia	580,300,000	19,565,000	491,440,000	17,900.00

The returns for the Associated Banks of New York are of date December 3d, the Banks of England and France December 8th, and the others are of date December 2d, as reported by the "Commercial and Financial Chronicle" cable. The New York banks do not report silver separately, but the specie carried is chiefly gold coin. The Bank of England reports gold only.

Shipments of silver from London to the East for the year up to November 24 are reported by Messrs. Pixley & Abell's circular as follows:

	1897.	1898.		Changes.
India	£5,064,156	£3,977,465	D.	£1,086,691
China	354,512	577,969	I.	223,457
The Straits	491,707	365,541	D.	126,166
Totals	£5,910,375	£4,920,975	D.	£989,40)

Arrivals for the week this year were £170,000 in bar silver from New York. Shipments were £32,522 in Mexican dollars to Hong Kong and £4,900 to the Straits Settlements; total, £37,422.

The demand for Indian exchange continues strong, since the exports are large, though money in India is much more plentiful than two

months ago. The Council bills offered in London were all taken at an average of 15.94d. per rupee.

The Treasury Department's estimate of the money in the United States on December 1st is as follows:

	In circulation.	In Treasury.	Totals.
Gold coin	$658,986,513	$138,441,547	$797,428,060
Silver dollars	63,980,333	404,258,264	468,238,597
Subsid. silver	69,997,276	6,673,205	76,670,481
Gold certificates..	35,280,649	1,620,400	36,901,049
Silver certificates	392,818,146	6,345,358	399,163,504
Treas. notes, 1890	95,781,482	1,411,798	97,193,280
U. S. notes.....	311,736,046	34,944,970	346,681,016
Currency Certfs..	20,190,000	450,000	20,640,000
Nat. Bank notes.	238,109,059	4,675,744	242,784,803
Totals	$1,886,879,504	$598,821,286	$2,485,700,790

The estimated circulation is $25.09 per capita. There was a net increase of $20,303,722 in circulation during November; and of $165,794,966 as compared with December 1st, 1897.

Daily Prices of Metals in New York.

December.	Sterling Exchange.	Silver. Fine oz. Cts.	Silver. London, P'nce	Copper. Lake, cts. ₽ lb.	Copper. Electrolytic, ₽ lb.	Copper. Lond'n standard £ ₽ ton.	Tin, cts. ₽ lb.	Lead, cts. ₽ lb.	Spelter cts. ₽ lb.
3	4.84¼	59⅝	27⅛	12¾	12.60	.....	18.	3 60	5.30
5	4.84¼	59⅛	27⅝	12⅝	12 55	55 5 0	18⅛	3.60	5.25
6	4.84¼	59⅛	27⅝	12¾	12.50	55 0 0	18¼	3.60	5.25
7	4.84¼	59⅛	27⅝	12¾	12.50	55 10 0	18¼	3.62½	5.20
8	4.84¼	59⅝	27½	12¾	12.50	55 15 0	18¼	3.62½	@5 25
9	4.84⅜	59⅝	27½	12¾	12.50	55 10 0	@18¼	3.62½	"

Average Prices of Silver per oz. Troy.

Month.	1898. Lond'n Pence.	1898. N. Y. Cents.	1897. Lond'n Pence.	1897. N. Y. Cents.	1896. Lond'n Pence.	1896. N. Y. Cents
January...	26.29	56.77	29.74	64.79	30.69	67.13
February..	25.89	56.07	29.68	64.67	31.01	67.67
March....	25.47	54.90	28.96	63 06	31.34	68.40
April.....	25 95	56.02	28.36	61.85	31.10	67.92
May.....	26 31	56.98	27.86	60.42	31.08	67.88
June.....	27.09	58.61	27.58	60 10	31.46	68.69
July.....	27.32	59.06	27.36	59.61	31.45	68 75
August....	27.48	59.54	24.93	54.19	30 93	67.34
September	28.05	60.68	25.66	55.24	30.19	65 68
October ..	27.90	60.42	26.77	57.57	29.68	65.05
November	27.93	60.60	26 87	57.93	29.46	64.98
December.	.....	.....	26.83	58.01	29.70	65.24
Year.....	.....	.....	27.55	59.79	30.67	67.06

The New York prices are per fine ounce; the London quotation is per standard ounce, 925 fine.

Average Prices of Metals per lb., New York.

Month.	Copper. 1898.	Copper. 1897.	Tin. 1898.	Tin. 1897.	Lead. 1898.	Lead. 1897.	Spelter. 1898.	Spelter. 1897.
Jan	10.99	11.75	13.87	13.44	3.65	3.04	3.96	3.91
Feb.....	11 28	11.92	14 08	13.59	3.71	3.28	4.01	4.02
March...	11.98	11.80	14.38	13.43	3.72	3.41	4.25	4.12
April...	12.14	11.48	14.60	13.34	3.63	3.32	4.26	4.13
May.....	12.00	11.03	14.52	13.44	3.64	3.26	4.27	4.21
June.....	11.89	11 11	15 22	13.77	3.82	3.33	4 77	4.24
July.....	11.63	11.11	15.60	13.89	3.95	3.72	4.66	4.32
August..	11.89	11.16	16.23	13.80	4.00	3.84	4.58	4.26
Sept.....	12.31	11.30	16.03	13.98	3.99	4.30	4.67	4.18
October..	12.41	11.13	17.42	13 88	3.78	4.00	4 98	4.17
Nov.....	12.86	10.88	18.20	13.79	3.70	3.76	5.29	4.03
Dec.....	.....	10.78	.....	13.71	.....	3.70	.....	3 89
Year.....	.....	11.29	.....	13.67	.....	3.58	.....	4.12

Prices of Foreign Coins.

	Bid.	Asked
Mexican dollars.....	$ .46½	$ .47½
Peruvian soles and Chilean pesos.....	.42	.43
Victoria sovereigns.....	4.84	4.87
Twenty francs.....	3.84	3.88
Twenty marks	4.73	4.78
Spanish 25 pesetas.....	4.78	4.84

Other Metals.

Copper.—The metal market has been rather lifeless and bare of any new features. The demand, as is usually the case at this season of the year, is slow, but inasmuch as producers have all they can do to fill contracts previously entered into, they have not been anxious sellers, and certainly not at the much lower prices which the buyers had in view. What little business was transacted was done at slight concessions, for Lake, at 12¾@12⅞c. For electrolytic in cakes, wirebars and ingots, at 12.50@12.55c.; for cathodes at 12.30@12⅜c., and casting copper at 12⅜@12½c.

The London market continues to fluctuate. At the beginning of the week prices experienced quite a setback, values for standard copper on December 6th being quoted as low as £54 17s. 6d. @£55, but there was quite a reaction from this, the closing figures to-day being £55 10s.@£55 12s. 6d. for spot and £55 12s. 6d.@£55 15s. for three months prompt. As a result of the unsettled condition of the standard copper market, very little business has been transacted in refined copper, which, however, will revive the moment a little more steadiness prevails, if for no other reason than that consumers appear to be very poorly supplied and working almost throughout on a hand to mouth policy. We quote: English tough, £58 10s.@£58 15s.; best selected, £59@£59 10s.; strong sheets, £67; India sheets, £63; yellow metal, 5¾d.

Exports of copper at New York for the week were 1,771 long tons, and matte, 181 tons. At Baltimore copper exports were 1,160 tons. Imports of copper at New York were 275 tons.

Tin.—Although the London cables reported a serious break at the beginning of the week, prices here have remained fairly steady on account of supplies being rather meagre. We quote the metal at 18⅛@18¼c.

The London market, on Monday, opened £1 lower than the close at the end of last week, recovered from the decline and advanced gradually to £82 5s., and closed at £82 5s.@£82 7s. 6d. for spot and £82 17s. 6d.@£83 for three months prompt.

Imports of tin at New York for the week were 1,150 tons.

Lead.—Lower prices have again been established as a result of some of the lots which were shipped from the West prior to the close of navigation being forced on the market. Several hundred tons were sold at the beginning of the week at 3.60c., but the market seems now to be pretty well cleared of these lots, and, while there is a somewhat better feeling, higher prices could not be established, the most urgent demands having been satisfied for the time being. We quote 3.62½c. New York and 3.50@3.52½c. St. Louis.

Prices for Spanish lead are again lower, the quotation now being £13 2s. 6d., and for English lead, £13 5s., with, it would seem, no immediate prospect for an improvement.

Exports of lead at New York for the week were 1,104 long tons, and at Baltimore 100 tons; a total of 1,204 tons. Imports of lead at New York the Metal Exchange reports at 46,400 bars.

St. Louis Lead Market.—The John Wahl Commission Company telegraphs us as follows: Lead is dull, and prices remain unchanged. Common metal is selling at 3.50c. and corroding lead at 3.52½c.

Spelter.—The demand continues fairly steady, but is no longer as brisk as it was during the few preceding months. This fact, coupled with advices received from the West that the uncommonly high prices for ore have experienced a setback—there being a decline of several dollars—has had the effect of producing quite a disposition on the part of sellers to meet the demand more fully than they have been willing to do for some time past, and prices have in consequence given way, the quotation being 5.05 @5.10c. at St. Louis and 5.20@5.25c. at New York.

The foreign market is a little firmer, so far as the quotation for spot metal is concerned, which has advanced to £24 2s. 6d., but for any other delivery it is stated that no buyers can be found, even at a considerable concession.

Antimony.—Prices remain unchanged at 9¼c. for Cookson's and 8¾@8⅞c. for all other brands.

Nickel continues on unchanged lines, and no alteration in prices can be reported. We quote for ton lots 33@36c. per lb., and for smaller orders 35½@38c. London prices are 14@16d. per lb., according to size and order.

Platinum.—Demand is steady. The metal can be had in large lots at $14.40; for smaller orders it is quoted at $15@$16 per oz. in New York. The London quotation is 58@60s. per oz. Prices are firm.

For chemical ware (crucibles and dishes), best hammered metal, current prices in New York are as follows: In lots of 250 grams or more, 56c. per gram; in lots of 100 grams, 58c. per gram; less than 100 grams, 60c. per gram; unmanufactured platinum will be supplied in small quantities at 2c. less per gram.

Quicksilver.—The New York quotation remains $41 per flask. The London price has been increased 2s. 6d. and is now £7 12s. 6d. a flask, with the same price asked from second hands.

The Minor Metals.—Quotations are given below for New York delivery:

Aluminum.	Per lb.		Per lb.
No. 1, 98% ingots..	33@40c.	Bismuth	$1.40
No. 2, 90% ingots..	31@34c.	Phosphorus	40@65c.
Rolled sheets.....	38c. up	Tungsten	70c.
Nickel alloy	33@39c.	Ferro-tungsten, 60%	60c.

Variations in price depend chiefly on the size of the order.

MINING STOCKS.

Complete quotations will be found on pages 716, 717 and 718 of mining stocks listed and dealt in at:

Baltimore.	New York	Mexico.
Boston.	Philadelphia	Paris.
Cleveland.	Pittsburg.	Rossland.
Colo. Springs.	St. Louis.	Shanghai.
Denver.	Salt Lake.	Toronto.
Helena.	San Francisco.	Valparaiso
	London.	

New York. Dec. 9.

The Mining Exchange has entered on a new career; it will hereafter deal in industrial and miscellaneous shares not handled on the general Stock Exchange. Renewed attention will also be given to mining stocks, and, to increase its membership, the Exchange has reduced its annual rental for seats from $50 to $30.

The Consolidated Stock and Petroleum Exchange reports an improved feeling in the Comstock shares. During the week several fair-sized sales are announced, and at the close prices are steady. The long-tried Hale & Norcross suit has finally been disposed of by the San Francisco Court, and to-day this stock rules the highest on the list. In settling the question of the judgment money the Court directs Receiver J. J. Groom to pay to the stockholders immediately a dividend of $1.50 per share, and to divide the surplus as may be decreed by the Court hereafter. The number of shares issued is 112,000, on which a $1.50 dividend would make $168,000. The Hale & Norcross Company has levied over $5,600,000 in assessments to April, 1898; hence the stockholders would appreciate a dividend, even at this late date. Of the original owners of the stock at the commencement of the litigation M. W. Fox alone remains.

The Colorado stocks are again favored by the excellent showing of the Mint at Denver, which during the 11 months ending November 30th, 1898, received in gold $18,269,272, which is an increase of $7,348,428 over the corresponding period in 1897. The Cripple Creek dividend payers are again appearing in our monthly list, and December promises to make a better showing than last year. Stock valuations here are fluctuating within the radius of the Western market.

Of the Californias, Standard Consolidated was bid down to $1.75, while holders asked $1.95. Preparations are being made to rebuild the mill, and it is understood it will be of fireproof material, thus saving a large part of the usual insurance as a reserve.

Alice of Montana dropped to 75c. bid, against 90c. asked.

Phoenix of Arizona is called for at 9c., while holders ask 12c. and up.

Auction sales included $15,000 Clinch Valley Coal & Iron Company 6% bonds, at $60.

Boston. Dec. 8.

(From Our Special Correspondent.)

Comparatively a quiet market early in the week, with increasing activity later, will describe the situation. There was a little reaction in most of the copper stocks but at the close they are generally firmer. Through all the week, however, Butte & Boston continued to go up, and at the close to-day it was quoted at $67—which is a pretty high price for shares that sold at $1 not so many months ago. Every one wants to know what it is, but no one is quite sure. Of course, there are all sorts of rumors afloat of big deals and consolidations; and we are all looking for the announcement of this deal soon. At present there is something mysterious about the stock, and Boston speculators always like a mystery—even if they come to grief on it at the end. Butte & Boston still goes up, and no one knows why. Any man will admit, if you corner him, that it is selling far above its real value; but he believes it will go higher still.

Boston & Montana shows little change, selling to-day at $238. Calumet and Hecla brought $610, ex-dividend. In the steady investment stocks there has been no material change. For the newer stocks there seems to be still a very good demand at high prices. Thus Arcadian is selling at $39, Isle Royal at $29 and Baltic at $28.

The gold stocks have not been specially active, and no sales of quicksilver shares are noted. The strongest gold stock was Santa Ysabel, at $6@$6½.

Dominion coal has held its ground well, in spite of a strong effort to beat down the price. It closes at $33. Federal steel has been a little weaker at $31@$31¼; the preferred bringing $76½.

Nothing can be predicted of the market, for no one knows where it will go to before the Butte bubble bursts.

Salt Lake City. Dec. 3.

(From Our Special Correspondent.)

Present trading in Utah mining shares is remarkable and locally there is nothing with which to draw a comparison. There are more bona fide sales, both on and off the Exchange, and the market is in more healthy form than at any prior period. I am forced to modify my forecast as to a general lowering of prices and a smaller volume of sales; to-day neither happening seems liable to occur soon. In addition to the old reliable traders, new stocks are coming into favor, and this broadening movement progresses along conservative lines. The surprising activity in the favorite shares is accompanied by more stirring operations at the mines, and this vigorous, healthy condition of more energetic mining again favorably reacts on the market. Recently a revival has occurred in new company quotations, most of which are legitimate undertakings, and the filing of the incorporation articles is followed by the beginning of systematic exploration of the properties. In brief, it may be said that both the Utah shore market and the actual operations of mining present a healthy front that is exceptional.

The cause of Swansea's strong upward move-

ment was made clear to-day, when the double dividend—10c. per share—was announced, payable December 10th. A fortnight since the management assured me this was not contemplated, all rumors to the contrary.

Grand Central did business at $8, a new record. The usual dividend of 12½c. per share will be paid December 10th. Mammoth has moved up to $2, with improved demand. Lower Mammoth has swung from 86c. to 63c., doing a brisk business. It closed the week strong after a lively bear attack, at 63½c. bid, 64c. asked. Emerald stands at 17c. bid, 18c. asked.

Mercur is once more in favor and is a participant in the upward movement. There are but few offerings, with a strong, quiet demand, a marked change from the drift of the past few months. Geyser Marion has taken on better form, closing 82c. bid, 84c. asked. It is given out that there is nothing new at the mines, but inside buying is noticeable. Chloride Point is very strong around $1.15. Little Pittsburg is firmer at 10½c. bid.

Ontario sold at $7.25, the top for many months. There appears to be a still hunt for the stock. Silver King stands at $30 bid; the 25c. dividend will be paid December 10th. Valeo has settled back, closing $1.30 bid, $1.32½ asked. Horn Silver sold at $1.20.

Dexter recovered from the slump of last week and closed $3 bid, $3.05 asked, the wherefore unexplainable. Utah is 85c. bid, 97c. asked.

San Francisco. Dec. 3.

(From Our Special Correspondent.)

There has been some improvement in the stock market, and business has been on a broader scale than at any time since last spring. It is still mainly an inside market, however, and very few orders from outsiders can be detected. As a rule, the quotations were firm, and prices are notably higher than they were a week ago. We have not yet got the active market hoped for, but at least matters look a little better.

The sensation of the week has been the compromise in Hale & Norcross case, under which the Court has ordered that out of the money recovered in the Fox suit a dividend of $1.50 a share will be paid, leaving a balance of $43,270, out of which some compensation will be made to M. W. Fox, and other expenses will be settled. This does not affect the claims of the rival boards of directors, as both joined in petitioning the Court for the division.

Some quotations reported are: Hale & Norcross, $1.55@$1.60; Consolidated California & Virginia, $1.40@$1.45; Sierra Nevada, $1.30@$1.35; Ophir, 70@71c.; Confidence, 69@70c.; Best & Belcher, 40c.; Mexican, 30@32c. There were some sales of Standard Consolidated at $1.75.

The sales on regular call at the San Francisco Stock Exchange compare as follows:

	1897.	1898.
January, shares	274,280	157,360
February	166,695	151,065
March	188,745	166,260
April	239,765	203,355
May	189,395	119,535
June	190,600	120,780
July	211,450	55,900
August	292,600	125,030
September	490,185	187,510
October	460,310	158,600
November	238,960	202,045
Totals	2,942,985	1,627,440

There has really been an improvement, November showing more sales than any month this year except April. The business is still considerably below last year.

London. Nov. 23.

(From our Special Correspondent.)

Though the mining market is as dull as ever, the South African section has been the scene of some mild sensation due to the passing of a new gold tax in the Transvaal. This tax, though looming in the future for some time, was passed very hurriedly and took all the companies by surprise. It is really in the nature of an income tax, being 5% of the net profits of the mines. The magnates seem inclined to kick. The Transvaal Government is at present on the verge of bankruptcy, and all its efforts to raise a loan to tide over its difficulties have been in vain so far, for English, French and German capitalists agree that the security is not good enough and that the loan is required to meet current and not capital expenditure. The Government being in straits for ready cash is trying to invent all sorts of taxes, and others may be imposed later on. One of the most likely is a tax on gold exported. The Consolidated Gold Fields of South Africa, Limited, have made a net profit after paying debenture interest and all other charges for the year ended June 30th last of £477,214, and are paying a dividend of 25% on the ordinary shares and the usual preferred dividend of 6%. The 25% dividend is on 1,450,000 shares and amounts to £362,500. Last year there were only 725,000 shares and a 50% dividend was paid, being exactly the same sum as this year. Last year the dividend was paid, not in cash, but in Simmer & Jack shares, while this year it is in cash. Since June 30th last the company has been amalgamated with Gold Fields Deep, Limited, so future comparisons will not be easy.

British Columbia and Klondike have been more prominently before the public this week than for some time. One Vancouver Island mining project, one electric railway scheme and one Klondike company have been advertised. The first of these is the Chemainus Mining & Smelting Company, Limited, which has been formed to acquire the Tyee claim in the Chemainus District of Vancouver Island. The prospectus is a very different one from the usual London type. It enters into great details with regard to the property; publishes the agreements of purchase in full and discloses the promoter's profits. I use the word promoter in no opprobrious sense when I say that the promoter of this company is Mr. Nicol Brown. Mr. Brown is well known in London as a shrewd and able business man, who thoroughly understands company work, and a champion of legitimate mining operations. In the present case the owners of the property, who are local men, do not get their purchase price until the mine has been proved to contain a certain minimum, and the purchase may be cancelled if after spending £5,000 the properties do not show up so well as expected.

Mr. Whitaker Wright is intending to bring out the Le Roi as a separate company in the course of a week or two, so we may infer that the difficulty about the minority holding in the present company has at last been overcome. The issue will be offered first to present holders of shares in the London & Globe, and the British-America corporations. The capital of the new company is not yet settled, but it will probably be £1,000,000, of which £850,000 will be purchase price and the remainder will be for working capital. As the details have not been worked out yet, some alteration may be made in these figures.

A few weeks ago when writing of this question I mentioned that the British-America corporation had nearly expended its working capital, and that owing to the unexpected postponement of the Le Roi deal, it would shortly be necessary to create fresh capital. This will not now be necessary, as the Le Roi flotation will bring all that is wanted. Of course, the shares of the Le Roi will be all subscribed for, but the fact remains that the late owners of the mine got the best bargain.

Paris. Nov. 27.

(From our Special Correspondent.)

Political affairs, both home and foreign, still absorb so much attention that the mining stock market must suffer. The disturbed conditions also have resulted in high rates of interest which naturally check speculation.

The misunderstanding with England, the outcome of which is still uncertain, naturally affects the market for the South African gold stocks. That market is practically dead for the present, and nothing is being done. The very large interest in the Transvaal mines which is owned here remains; but the holders are simply waiting the course of events, and the amount of buying and selling at present is not simply limited, it is nothing.

Copper shares continue active and high, in spite of a slight reaction this week. The continued strong demand for the metal and the well-maintained quotations form a quite sufficient basis. Should war result from present complications it will increase the demand rather than lessen it.

This same line of argument applies to the metallurgical shares, and a rise in most of these stocks has been a feature of the past week. Most of the companies have shown little or no increase in dividends this year, in spite of the good trade they have had. The payment of old debts and the provision of new machinery have absorbed in most cases the additional profits earned. For many of the companies this is a prudent course, and it certainly adds to the value of the stockholders' property.

M. Paul Leroy-Beaulieu has published a very strong article on the growth of officialism in France. He points out how, at each of our frequent changes of ministry, there is a crowd of retainers and relatives to be provided for; and the consequence is the constant modification of offices. In all the departments of the Administration the number of employes has grown far more rapidly than the work. The contrast of the present state of the different bureaus with that of ten years ago is a striking one. This has a great deal to do with our continually growing public expenses and the burden of taxation. Moreover, it is educating a large class of young men to expect and intrigue for places. It is not a lofty ambition and the rewards in the way of salary are small. Once in office the average employee loses all ambition to improve himself, and is too apt to become a mere creature of routine, helpless beyond the narrow round of his petty duties. It is a development of what you, I believe, call the "spoils system," which does not promise well for the future. The trouble is that every party hopes to profit by it some day, and none will undertake the reform of the system.

I am again informed that the managers of the Panama Canal Company have arranged to make a strong presentation to your Government and Congress of the advantages which their work possesses over the Nicaragua scheme. They are saying little or nothing about it openly, but you may be sure that the plan will be strongly and shrewdly presented. In the work already done and the time required to complete the canal they have certainly a great superiority. They are quite willing to accept American control, if American money enough can be had also.

Azote.

LATE NEWS.

COLORADO.

Cripple Creek.

(From Our Special Correspondent.)

Monument Gold Mining Company.—This is a newly incorporated company and owns the Monument Mine. It is situated between the Portland and Granite mines, on Battle Mountain. The capitalization is 3,000 shares, of the par value of $1.00 per share. The officers for the first year are as follows: Ira Williams, president; V. Z. Reed, vice-president; A. F. Woodward, secretary and treasurer; E. E. Everett, general manager, and Ella McGovney. The property is at present being worked under lease by Mr. Everett and others. It is understood that the owners have received in the neighborhood of $4,000 in royalties. It is also reported that the leasing system will be continued in the future. E. E. Everett of Cripple Creek, has charge of the mine.

Trachyte.—This property on the south slope of Bull Hill is being worked by several lessees. One of the principal ones is the Engineers' Mining and Leasing Company, which is operating on the south end of the claim. A drift has been run from the bottom of the 200-ft. shaft and a vein encountered which is suppoed to be the same as that worked by the Little Pearl, which property is adjoining. The prospects of this property are quite bright.

Battle Mountain Consolidated.—This company is now in shape to ship a carload of ore per day from its Trail property on Battle Mountain. The company owns considerable property on Battle and Squaw mountains, among others the Uintah Tunnel, which it purchased some time ago from James Doyle, of Victor. This company is controlled by the Woods Investment Company, of Victor.

San Juan County.

(From Our Special Correspondent.)

Queen Ann.—The owner, J. V. Kilbourne, is making extensive preparations for winter development work. The property was at one time one of San Juan County's best shippers, but has lain comparatively idle for the past 10 years.

Ridgeway.—Contracts have been let and work started on a 350-ft. crosscut tunnel, which will tap the vein 100 ft. below the present workings. The mine is being worked systematically and more than pays running expenses without stoping. A force of 22 men will be employed during the winter.

Sheridan.—This mine, owned by Pat and Dan Fitzgerald, in the Red Mountain District, will be worked this winter.

Sioux City.—One car of copper sulphide ore has been shipped since this mine was leased to Rogers, Bawden & Colmer. This is another of the old patented properties which has not been worked for years.

MISSOURI.

Jasper County.

(From Our Special Correspondent.)

Davis, Holden & Company.—A big prospect has been struck in drifting at 60 ft. on the Roaring Springs land south of Joplin. H. E. Davis and Thos. Holden, of Joplin, and C. M. Summer, of Galena, are the owners of the lease of four lots. The face of ore so far developed is 12 ft. high and 30 ft. wide. Two sales of ore have brought $1,500.

Sphinx Mining Company.—The new concentrating plant at the Sphinx mines on the Dolle land, at Hell's Neck, will run chats over the plant that were made from the hand jigs before cutting on the big faces of zinc ore that have been developed in the past few weeks.

T. J. Sterrs & Company.—The firm is moving the Phœnix plant to a lot south of its present location, where there is a large face of lead and zinc ore at 160 ft. The ground is to be broken by 6 air drills. At the Laura plant, on the old Legal Tender lot, the firm has put in a large air compressor to run the air drills in that mine and the Vernon. The Vernon plant is running steady, also the Laura plant on the Get There lease.

STOCK QUOTATIONS.

NEW YORK.‡

Name of Company.	Location.	Par val.	Dec. 3. H.	Dec. 3. L.	Dec. 5. H.	Dec. 5. L.	Dec. 6. H.	Dec. 6. L.	Dec. 7. H.	Dec. 7. L.	Dec. 8. H.	Dec. 8. L.	Dec. 9. H.	Dec. 9. L.	Sales.
Adams Con.	Colo.	$ 0	05		08		08		.08						1,000
Alamo.	"								.05						1,000
Alice	Mont.	25	80				85	7	8	.75	80	75			100
American Flag	Colo.	1													
American Gold	"														
Anaconda Gold	"	5	55				64		6						8.0
Andes	Nev.	1													500
Argentum-Jun.	"	2													
Best & Belcher	"	5	41		35		45		38		42	35			1,0.0
Belcher	"	5	24		24	20			25		25	20			
Breece	Colo.	25	9	8	9	85	85		95	80	95	85			
Brunswick	Cal.	1		1		1		1	1						
Caledonia	S. D.		70		70		5								
Cannon Ball	Colo.	1	0.5	0.3	0.3				.0025		.0022		0.35	.0.35	5,000
Chollar	Nev.	2	23	20	20		22		24		24	18			
Chrysolite	Colo.	50	14		14	12	12		12		15	12			
Consol'd T. & D's	Nev.	10	04		04		04		04		04				
do. stocks	"	100	04		04		04		04		04				
do. scrip	"	100	04		04		04		04		04				
Con. Cal. & Va	"	2½	1.55		1 50		1.55		1.55		1.55		1.40		500
Con Imp	"		03				.05								2,000
Copper Rock	Colo.	1	.0 ¾		0.3¾		0.04		6 ¼		0.4¾		0.01	0.03¾	2,.00
Cr. & Cr. Creek	"	1	05				04		.05						1,50
Crescent	"	10	05		.05		10				10				
Cripple Cr. Con	"	1			0								10		2,0 0
Crown Point	Nev.	3	17		15				15		.1				
Deadw'd Terra	S. Dak	2	45		45	4	4	38	45	42	4				
Elkton Con	Colo.	1	1.0	.95	96		90		85				95	85	
Enterprise	"		57		57		4		55		55				
Father de Smet	S. Dak	100	18		18	8	10		14	10	14	1			
Garfield Con.	Colo.	1	15	.12	12½				12	12½	14½		.0	12½	1,500
Golden Fleece	"	1	25		24		24		25						
Gold & Globe	"	1													
Gold Magnet	"	1							00½		00½		002	0.1	
Gould & Curry	Nev.	3	15		16		16		2		25				
Hale & Norcross	"	100	.40		1.40	1.00	1 40		1 40	1 00	1 40	1.00			
Homestake	S. Dak	100	50 00		51.00		50 00		50 00		50 00				
Horn Silver	Utah.	25	1.05		1 0		1.05	1 0	1 15	1.10	1 15				
Iron Silver	Colo.	20			.85		77		75	73	74				1,0
Isabella	"		25		26½	25	26		26		26		25	2	
Japan		10	5 00	2 50			2 50		2 50		2 50		5 00	2 50	
Jefferson	Colo.	1	07½	06	06		06		06		0.6		08	05	2.0
Julia Con	Nev.	1	0		01										
Justice	Colo.	1	03	1½	0.3½		02		02½				.03	0.3½	20
King & Pemb	Ont.	0	17		18	17	15		12		13				3.0
Lacrosse	Colo.	10	14		14	05	14	08	14	0	14	10			
Lagonda	"	1					07½	3						01	5.0
Leadville Con.	"	10	08		09	08	09	07	09	08	09	08			
Lillie	"	1													
Little Chief	"	50					17		2	17	17				
Mexican	Nev.	3	35		35		28	25	30		4		4		2.0
Mollie Gibson	Colo.	5	28		29		26	0	26		25		25	.25	2.50
Mt. Rosa	"	1			.10		18		18½		20		20		2.0
Occidental	Nev.	3					04								
Old Gold	Colo.	1	.005	.0023	0025		0.25		0.26		.0024		0.1	00	5,000
Ontario	Utah.	100			3 00				6.5						15
Ophir	Nev.	3					60		70		60				2.0
Pharmacist	Colo.	1	05		.05		04				05				1,5.0
Phoenix	Ariz.	1	10		12	1	12	10	3		19		.0	.01	4 0.0
Pilgrim	Colo.	1							00		0.2		.0	.01	3,000
Plymouth Con.	Cal.	10	0		10	08	08		08		10	05			
Portland	Colo.	1	1 5	1 40	1 40		1 40		1 40		1 40		1 5	1 40	
Potosi	Nev.	3			.25		2		2		20	20			
Quicksilver	Cal.	100	.5		1 75		1 75		1 75		1 75				20
do. pref	"	100	4 50		5 50		5 50		5.0		6.0				2.0
Rocky Mtn	Colo	1							.06		0.5			0.1½	1,5
St. F. Cariboo	B. Col.	1							5		15		18	15	
Savage	Nev.	2½			.17	15	5		15		18		.00.5	.0012	8,0.0
Sentinel	Colo	1	.0012	.0011	0.012		0 1		00						
Sierra Nevada	Nev.	3	1 15		1 00		1.20		1 0		1 15	1 00			
Small Hopes	Colo.	.20	1 00		1.0		1 15		1 0		1 25		1.2		20
Standard Con.	Cal	100	1.80		1 75		1 80		1 75		1.80	1.75			2.0
Syndicate	"	100													
Union	Colo.	1	18		17		18		18		18				
Union Con.	Nev.	2½	20		.0		23		23		2.0				
Utah Con.	"	5	05		05		19		12		12				4 0
Waldorf	Colo.	1							05		01		.02	.01	10
Work	"	1	12		.10		12½	11	14		11	10	15	11½	1.0
Yellow Jacket	Nev.	3	22		.16		22	2.	24		22		.22		1,0.9

COAL AND INDUSTRIAL STOCKS

American Coal	Md.	$25	140	120	140	120	140	120	130	120	140	120			
Central of N. J	N. J	100	93¾		93	92	93¾	93	92¾		93¼	93¾	94		4,750
Col. C. & I. Dev	Colo.	100	⅝	⅜	1¾	⅝	1¾	⅝	1¾	⅝	1¾	⅝			
Col. Fuel & I.	"	100	25¾	23	25¾		25	23¾	25	23¾	24		24		1,695
Col. & H. C. & I	Ohio.	100	5¾	4¾	5¾	4¾	5	4¾	5	4¾	5	4¾			
Con. Coal	Md.	100		47			47		47		47				
Del. & Hud		100	99¾		101¾	100	1 5¾	101	1.5	1 4¼	1 4¾	1 4¾	1 4½		15,585
Ed'n E.L. of N.Y	N. Y	100	170	165	1.4	170	1 74		170	165	172½	168¾	168		3,815
Federal Steel		100	32¾	31½	32	31¾	31¾	31	31¾	31	31¾	31	31¾		4,0.0
" " pf		100	75¾	74	77¾	76¾	76¾	75¾	76¾	75¾	77¾	76¾	77¾		56,1.4
Illinois Steel	Ill	100													
Maryland C. pf	Md.	100	52	47	52	47	52	47	52	48	53½		54		2.0
Minnesota Ir.	Minn.	100													
National Lead		100	36¾	36¼	36¾	36	36	3.¾	36¼	35¾	36¾	36¼	37½		7,957
New Central C	Md.	100	42	38	40		42	39	41	39	40				2.0
N. Y., Ont. & W.	N. Y.	100	16	5¾	16¾	16	16¼	15¾	16¾	6	16		16¾		2,533
Penns'lv'nia C.	Pa.	100		3.0		3.0		3.0		34		345			
Phila. & Read	"	100	18¾		18¾		19	18¾	19	18¾	18¾	18¾	18¾		4,18
" " 1st pf.	"	100	45	43	45	44¾	4 5¾	44¾	46¾	44	46¾	44¾	46¾		
Standard Oil		100	4.0	419½	423	422	4.4	424	422	421	419½	4 9			
Tenn.C., I. & R.R.	Ala.	100	31¾	3.9¾	3.9¾	31¼	32¾	31¼	32	31¾	3.9¾	31¼	31¾		5,9.0

‡Official quotations of New York Stock, Consolidated Stock and Petroleum and Mining Exchanges. Total sales, Mining, 39,5.0; other stocks, 164,782 shares. *When issued.

PHILADELPHIA, PA.‡

Name of Company	L'cation.	Par Val.	Dec. 2. H.	Dec. 2. L.	Dec. 3. H.	Dec. 3. L.	Dec. 5. H.	Dec. 5. L.	Dec. 6. H.	Dec. 6. L.	Dec. 7. H.	Dec. 7. L.	Dec. 8. H.	Dec. 8. L.	Sales
Cambria Iron	Pa.	$50	42 50	42	5 42 38	42 14	42 25	42 0	42 25	1. 00	42 25	42 0	42 50	42 0	3,446
Choct'w pref.	I. T.	50	4 7	0 63	4.00	41.88	41 00	41.88	41.88	41 75	41 88		42 0	41 13	1,0.5
Hunt & Br.pr'f	Pa.	50	41.50												67
Lehigh Nav.	"	50	37.5	37 00	38.00		38.00								128
" Val			22 13	2 00	22 13	21 5	21.88	21 25	21.6	2 0 38	2 88		2 50		9.8.9
Penna. R. R			58.5	59 38	59.88		59.75	59.63	59 63	59 38	59.63	59 38			1,4 6
Penna. Steel	Pa	100	8.5										.0 00	19.0	2
" pr'f	"	100			88.00		88.0						89.00		7
United Gas I.	"	50	123¾	123	123.5	122¾	123¾	123	125	123¾	126¾	125	127¾	126	14,08
Welsb. Con.	Can.	5									1.0				.0
Welsb. Coml	"	100									1.0		.0.0		18
" Pref	"	1 0			55 25						65 00				1.6
" Light	"	100	33 50		33 .5	33.5	33 5		34 00	33 75	35 00		37.00	35 00	1,6.5
West. Coal	Pa.	50		49.00		49.0		49.0		49.00	5 1.00				10

‡Official quotations Philadelphia Stock Exchange. Total shares sold, 32,117.

PITTSBURQ, PA. Dec 7.

Name of Company.	Location.	Par val	Bid.	Ask.	Name of Company.	Location.	Par val	Bid.	Ask
Allegheny	Pa.	$100			N. Y. & C. Gas	Pa.	$50		
Car orundum	"	100			Peoples' Natural Gas	"	50	31½	
Chartiers Valley	"	100			Peoples' Pipeage	"	25	18	
Enterprise Mining	Colo.	5			Pennsylvania Gas	"	50		
Lustre Mining	Mex.	10			Philadelphia Gas	"	5	37½	
Mansfield Coal	Pa.	50			Silverton Mining	Colo.	10		
Manufact. Gas	"	50			Wheeling Gas	W.V	50		40

BOSTON, MASS.‡

Name of Company.	Par val.	No. of shares	Dec. 2. H.	Dec. 2. L.	Dec. 3. H.	Dec. 3. L.	Dec. 5. H.	Dec. 5. L.	Dec. 6. H.	Dec. 6. L.	Dec. 7. H.	Dec. 7. L.	Dec. 8. H.	Dec. 8. L.	Sales
Aetna cons fd	$5	100,000											4 00		15
Allouez, c	25	80,000	5.13	4 93	5 13	5 0	5 25	5 00	5 00		5.00		5 13	5 00	2,1.0
Arcadian	25	100,000	38 00	36 50	37 13	36 0	38 75	36 5	38 00	37 75	39.50	38.00	39 38	38 7.	5, 9
Arnold, c	25	40,000	14 50	12 25	13 38	12 50	13.00	12 50	13 00	12.50	3 25	12 88	12 75	12.63	6,89
Ash Bed, c	25	40,000	2 25	2.0	2 00				2 25						15
Atlantic, c	25	40,000	2 00	1 25	1 90	1 75	1 90	1 00	31.75	31.50	31 50		32 5	31 00	92.
Baltic, c	25	100,000	26 75	25 50	25 50	25 00					26 25	25 50	26 00	25 50	28 0
Bonanza, g	10	300,000	1.275	1.20	1.225		1 25		1.25		1 25	1 20	1.275		6,967
Boston Con. g c															3,910
Bostor & C C. g	2	200,000	.42½	40	.45	.42½	.43½	35	40	.35	37½		.42½	37½	18,635
Bost. & Mont. gsc	25	150,000	2.0	2.0	2.0		2.6	2.3½	2.5	2.35	240	237½	240	237½	4,6 3
Breece, i	25	240,000													
Butte & Bost., c	25	200,000	57 25	56 00	58 50	5.1.0	58 50	56 5.	61 63	58 00	5.0 00	61 00	68.50	64	31,453
Cal. & Hecla, c	25	100,000	6.0				610	605			61.	605	610	603½	12.
Calumet, s	10	300,000	.25		.25						.25		.25		90
Centennial, s	25	80,000	24 75	24 50	24 63	24 00	25 25	24 75	25 00	24.75	25 75	24 75	26 00	25 50	18,647
Crescent	10	150,000			.1						.15	.3			7.0
Dominion Coal	100	150,000	33.00	3 .00	32 00	30 13	32.00	31 63	31 75	30 75	33.0	31.50	33 00	32 5.	19,3.5
do. pref	100	30,000	1.6		1.6		1.6		1.6		1.6		1.6		7.0
Durkin Mg	25	200,000	.2.		.2						.2	.23	.27½	25	3.1
Franklin, c	25	40,000	5.75	15 13	15 50		16.5	15 88	17 00	16 25	18 5.	17.50	18.75	18.0	9, 0
Gold Coin	5	20 ,000	50												4.0
Humboldt, c	25	40,000			3 75	3.25	3 88								1.0
Illinois Steel	100	186,500													
L. Boycle Con. c	25	100,000	28.75	27.75	28 50	27.50	29.00	28 00					28.50	28 0	28.71
Lake Sup., i	23	84, 0.													
Merced	15	100,000													
Napa, q	7	100,000									5.50		5.50		5.5
New Idria, q	5	100,000													
Old Dominion, c	25	150,000	32 00	31.00	32.25	31 25	33 00	31 50	33 00	32 50	33 50	31 00	34.38	33 0	15,215
Oregon, c	25	100,000			30.13						69 50	68 25	71.25	69 5.	7.4 0
Parrot, s c	10	200,000					30.0	28 5	30.0	29 0	29 00		2 .0		9.0
Pioneer, g	10	100,000	5 00				5.00	4 93	5.00	4 88	4 88		4.88		1,145
Quincy, c	25	100,000	148	126	135	134	135	134	135	133	135	134	136	135	1. 78
San. Ysabel, g	5	100,000	6 50		6 25								6 00		450
Tamarack, c	25	60,000	172½	170	170	168	170	168¾			169		171	169	696
Tecumseh, c	25	40,000	5.75	5.50	5 50		5.50		5 75	5 50			5 75		9.0
Utah Con., g	10	1.0,000													
Victor		200,000	5 00		5 50	4 63	5 50		5 50	5.25			5 50		2 80
Washington Mg	25	40,000	1 5	1.25			1 25				1 50		1 38		9.0
Wolverine, c	25	60,000	32 00	29.5	32 00	31 00	31.88	31 50	32.5	31 63	32 0	31 50	32 .0	32 00	3,947

‡ Official quotations Boston Stock Exchange. Total shares sold, 177 035 *Ex-dividend.

BALTIMORE, MD.‡ Dec. 8.

Name of Company.	Location.	Par value	Bid.	Ask	Name of Company.	Location.	Par value	Bid.	Ask
Atlantic Coal	Md.	$10			Howard C. & C	Md.	$5		
Big Vein Coal	"	10			Newburg Orrel C.	"	25		
Consolidation Coal	"	100	50	51	Silver Valley	N. C	5		
George's Creek Coal	"	100	113½						

CLEVELAND, O. Dec. 7.

Name of Co.	Iron Range.	Par Val.	Dec. 7. Bid.	Dec. 7. Ask.	Name of Co.	Iron Range.	Par Val.	Dec. 7. Bid.	Dec. 7. Ask.
Aurora	Gogebic	$25		$4	Jackson	Marquette	$25		
Champion		25		45	Lake Superior	"	25	$26	$30
Chandler	Vermillion	25	$40	4.	Minnesota	Verm. & Mes	00	91	92
Cleve'd-Cliffs	Marquette	100	43½	45	Pitts & L'ke Ang	Marquette	25	105	125
Fed. Steel Co.		100	25½	30	Republic	"	25	9	11

ST. LOUIS, MO. Dec. 7.

Name of Company.	Location.	Par value.	Latest Bid.	Latest Ask.	Sales.	Name of Company.	Location.	Par value	Latest Bid.	Latest A k	Sales.
Am. Gold	Colo.	$10				Granite B.	Mont.	$10	$.50	$1.6.	2,0.0
Am. Nettie	Colo.	10	$0.87½	$0.90		Hope St.	Mona.	10			
Central L.	Mo.	100				St. Jos. L.	Mo.	10	12.75	13.50	
Doe Run L.	Mo.	100	131			Sm. Hopes	Colo	20			

COLORADO SPRINGS, COLO.‡

Name of Company.	Par val	Nov. 28. B.	Nov. 28. A.	Nov. 29. B.	Nov. 29. A.	Nov. 30. B.	Nov. 30. A	Dec 1. B.	Dec 1. A.	Dec. 2 B.	Dec. 2 A	Dec. 3 B.	Dec. 3 A.	Sales
Alamo	$			04½	04¾	04¾	05							14,0.0
Anaconda	1		.38½		.36							.58¾	.59	8.0
Arg'ntum Jan'er	1	36¾	38¾	38	38½	.38	39¾	41	46¼			39	4.¾	110,363
Gat le & Mt.	1	28	38¾	40	41	43¾	44¾					40¾	43	1,440
Bob Lee	1			0 4	05½	0 4¼	005	.003½				.0 4	.05¾	
C. Lan bine		14¼	14¾	14¾	15	14¾	15					.5	.15½	1,40
Cr. & C. Cons	1		.05¾	.4¾	05½	.04¾	15¾	.03				.05	05¾	17,0.0
C. C. Con	1			08¾	08¾		08¾		08¾			08¾		16,50
Currency	1											.03¾		5,0.0
Des Moines	1		01¾											4,0.0
ElktonCon	1	94¾	95¾	94¾	95	94¾	95¾	.95	95¾					37,2.0
El Paso	1	.39¾	42	39¾	41	39	44	.40				43¾	.42	19, 2.
Favorite	1		02¾		02¾									3,4.0
Findley	1		.16¾	15¾	.16	15	.15¾	16	16¾			.16¾		48,5.0
Franklin	1	.05	0.	.006		.006		.006				.0.6		
Gold & Gl.	1								.05¾			.05¾		3,0.0
Golden Fl.	1		.32									.30		1,0.0
Hayden G	1			07¾										5,1.0
Harpencod'e	1	.57	.58	.58	53¾	60	.63¾	.6.¾	.61¾			59 4	.61	16,10
Ing. Con	1		07¾		.05¾	05¾	.08¾							11,0.0
Isabella	1	.27	27½	26¾	.26¾	.29¾	.27	27	27			26¾	.26¾	68,1.0
Jack Pot	1	22	22¾	.22¾	23¾	.24	24¼	.24¾	25¼			.24	24.¾	183,80
Lillie	1													25,0.0
Ma'net R.	1		0.3¾		0.3¾		01¼	.0 3¾				.01¾		4,32.0
Marion	1			02	03									1,5.0
Matoa	1		34¾	33¾	33¾	33¾		33¾	34			33	33¾	1,5.0
Mobile	1				03¾			03¾				03¾	.03¾	12,4.0
Moll e Gib.	1			24	.25¾	.26	25¾	27½	.29			27	28	10,4.0
Moon-A'c'r	1		1 24	1 24½	1.25	1 23	1 25¾					1 19	1 20	7,55.0
Mt. Rosa	1	.21½	24	21¾	22¼	21¾	22					19½	.19¾	14,0.0
New Haven	1		02¾		02¾		02¾							2,0.0
Oriole	1				01¼							01¾		3,0.0
Pharmacist	1	03¾	0.3¾				03¾	03¾	.03¾			03¾	03¾	33,0.0
Pilgrim C	1		03				.03							1,0.0
Pinnacle	1						03¾	03¾				.03¾		23,5.0
Portland	1	1.41¾	1 42	41¾	1.42	1.41	1.41¾	1 4.¾	.42			1.42		18,9.0
Prince Alb	1													5.0
Princess	1	.02¾	.03		.03									31,0.0
Specimen	1						04	04	.04¾			04¾		7,7.0
Theresa	1			.08		.08	.09¾		05¾			08¾		195,5.0
Trachyte	1	04¾	04¾	04¾	04¾	04¾	04¾	03¾	04			.04		24,6.0
Union	1	.20	2.¾	20	2.¾	19¾	20	19¾	.20			.19¾		2,0.0
Vindicator	1				1 12¾							1 12¾		
Work	1	12¾	13¾	12¾	12¾	12¾	13¾	.12¾	13¾			12¾	13¾	343,02.0

‡ Official quotations Colo. Springs Mining Stock Exchange. Sales: Listed stocks, 1,3.3,49; unlisted, 8.0,53; total 2,271,550 shares.

By Telegraph.

Name of Company.	Par Val	Dec. 2 B	Dec. 2 A	Dec. 3. B.	Dec. 3. A.	Dec. 5. B.	Dec. 5. A.	Dec. 6. B.	Dec. 6. A.	Dec 7 B.	Dec. 8 A.
Alamo	$1	04¾	.15¾	04¾	.05	04¾	.5¾	04¾	5	04¾	05
Anchoria-Leland	5	9	9¾	90	.92	9	92	96	96¾	.93	83
ElktonCon	1	.92¾	93	93	94	91¾	92	8.¾	.85	.82½	82¾
Gold Coin, Vict	2	1 48	1 49	1 45	1 49	50¾	1 5	1.5	1 56	1 56	1 56
Golden Fleece	1	.30	40	.25	3.	.25	.30	.25	.33	47	30
Lillie	1	6.00	6 00	6 00	6 .0	6 00	6.00				
Moon-Anchor	1	.19	1 20	1 18¾	1 19½	1 19	1 20	1 18	1 18¾	1 17	1 18
Mt. Rosa	1	19¾	.20	.19¾	.20	.19	.20	18¾	.20	.18¾	19¼
Portland	1	1 41¾	1 42	1 42	1.43	1.43¾	1 44	1 4.¾	1 46¾	1 46	1 47

Name of Company.	Par Val	Dec. 8 B	Dec. 8 A
Alamo	$1	.04¾	05
Anchoria-Leland	5	96	96¾
ElktonCon	1	8.¾	.82¾
Gold Coin, Vict	2	1 56	1 56
Golden Fleece	1	26¾	30
Lillie	1	1.18¾	1 17¾
Moon-Anchor	1	18¾	20
Mt. Rosa	1	18¾	19¼
Portland	1	1.46¾	1.47

STOCK QUOTATIONS.

DENVER, COLO.‡

NAME OF COMPANY.	Par val.	Nov. 28. B	Nov. 28. A	Nov. 29 B	Nov. 29 A	Nov. 30 B	Nov. 30 A	Dec. 1 B.	Dec. 1 A.	Dec. 2 B	Dec. 2 A	Dec 3 B.	Dec 3 A	Sales.
Mines.														
Anac'da G.	$5	.58¾	.61	.....	.....	51	60	51½	58	54	57	.57	.59	1,000
Anch'a Lei	1	.82	.....	.....	.....	85	.....	91	.....	91	.....	91	.....	.....
Arca'a Con.	1	02¾	.03½	02¾	03	0 3¾	03¾	02¾	02¾	.02¾	.03	.03¾	.03	3,000
Atz J.	1	37	.....	.....	.....	3 ¾	38¾	.43	.....	43½	45	4	.....	1,500
Bangkok	1	01¾	02¾	01¾	.....	0 ¾	.....	01½	02¾	02¾	.....	02	.....	2,000
Big Six	1	06	.....	.91	.....	04	.....	04	.....	01¾	.....	04	.....	.....
C. C. Con.	1	08¾	.08¾	08¾	.....	0 9¾	08¾	08	08¾	08¾	.18¾	08¾	08¾	6,000
Elkton Con.	1	94	9	.....	.....	94¾	96½	94¾	.96	.....	94½	92	93	1,000
El Paso, G.	1	12¾	13¾	.....	.....	11¾	12¾	1 1¾	1 1¾	.1¼	13	.....	.....	4,000
Enterprise	1	04¾	04¾	.....	.....	04¾	05	05	05¾	5¾	13¾	.....	.04½	12,00
Fanny R.	1	.....	.....	.....	.....	42	.....	45	.40	43	44	.....	.....	1,000
Gold & Si	1	.....	.....	.....	.....	12	3	12¾	.11½	.2¾	13¾	12½	.....	.....
Gold Coin.	1	1 35	.....	1.35	.....	1 50	1 53	1 47	1 51	1 49	52	1 47	.....	1,600
Independ'nce	1	57	.57¾	.....	.....	60	6 3¾	60	61	.....	61	6 3¾	.....	3 700
Iron Chief.	1	0 3¾	03¾	03¾	.03¾	0 3¾	0 4¾	0 2¾	03	02¾	.....	.2¾	.....	5,000
Isabella.	1	.26¾	27¾	26	.27	.25¾	26½	.7½	27¾	.6¾	26¾	.25½	26½	32,000
Jack Pot.	1	21¾	22¾	.....	.....	23¾	24¾	23½	.25¾	24¾	25	23	.....	7,571
Jefferson.	1	.....	.....	.....	.....	05	06¾	04	06	.05½	06¾	.5¾	.....	2,0
Matoa	1	31¾	.33½	.....	.....	32	.36	33	.....	33	.....	.32	.32¾	1,00
Mollie Gib	5	23¾	.....	23¾	.....	.25	.....	28¾	25	29	.....	27	.30	3,400
Moon A.	1	1 23¾	1.25	1 0	.....	1 23¾	1 24¾	1 22	1 22½	.....	.....	1.23	1 24¾	3,500
Mt Rosa.	1	23	.25	.....	.....	21	.21¾	.22	.22¾	.....	.....	.....	.....	6,500
Ophir	1	09½	.....	09¾	.....	.....	.....	.....	.....	.....	.....	10	.....	500
Pharmacist	1	03¾	.04	03	.....	.03¾	04	03¾	04	.03¾	.....	03¾	.....	1,000
Portland	1	1 40	1.43	.....	1 42	1 40½	.....	.....	1 42	1 40½	.....	1 4	.....	800
Fr. Albert.	1	.....	.....	.02	02¾	0 3¾	.....	01¾	02¾	.....	.....	.01¾	.....	6,000
Sacram'nto	1	.03¾	04¾	.03½	04¾	03¾	.....	03¾	04½	.....	.....	03¾	.....	6 000
Specimen	1	.....	.....	.....	.....	.....	.....	.3¾	04¾	.....	.....	.....	.....	4,00
Squ wMtn	1	.01	.01½	01¾	.....	.01	.01¾	01	1¾	01¾	.....	.01	.01¾	1,25
Union Gold	1	2 ¾	2 ½	.....	.....	19½	.2 ½	19½	2	19¾	.20½	.....	.....	5, 0
Va. M	1	02¾	.03½	.0 ¾	.....	.3	.3¾	.2¾	.03½	02¾	.3¾	02¾	.....	2 0 0
Work	1	.2¾	13½	.12¾	12½	12¾	.13¾	13¾	.14	13¾	13¾	.....	13½	5,000
Prosp'cts:														
C. C. Imp.	1	.01½	.....	0 1¾	002¾	0 1¾	.....	001¾	002	.001¾	02	.01¾	002	25,000
Findley	1	16¾	.16¾	.....	.....	.....	.....	15¾	.16	.6¾	17	.6	17	4,000
Gene Field.	1	001¾	.....	0 1¾	.....	0 1¾	002	0 1¾	002	001¾	0 02¾	0 1¾	.....	1, 0
Gilpin Four	1	.....	.....	.04	005	001	.....	0 4	.004¾	.004	0 5	.....	.....	2,00
New Haven	1	02¾	.....	02	03¾	02	03	02	02¾	02	03¾	.....	.....	7,0
Pilkrim.	1	.03	.004	0 3¾	004	.003	.0 4	.003	003¾	.003	0 3¾	.003	003¾	5,00
Puritan.	1	002	.....	.002¾	0 3¾	.002¾	04	002¾	003¾	.00 3¾	.....	.....	0 3¾	50
Reno	1	0 3¾	02¾	.01¾	.02	02	.....	02	02¾	02	02¾	02¾	.03¾	3, 0
Tamarack.	1	.003¾	006	.....	.....	005¾	.0 6	0 5¾	.006	.005¾	06	.....	.....	39,0 0
W.of F Con	1	0 3	.....	.003	.004	00 5¾	.....	003¾	0 3¾	.003	.003¾	0 03¾	.....	6,0 0

‡Official Quotations Denver Stock Exchange. Sales: Mines, 128,221 shares; Prospects, 93,500 shares; grand total, 221,721 shares.

SAN FRANCISCO, CAL.‡

NAME OF COMPANY.	Location.	Par. value.	Dec. 1 2.	Dec. 3.	Dec. 5.	Dec. 6.	Dec. 7.	Dec 8
Alpha Con.	Nev.	1.00	.....	.05	06	.05	.06	.06
Alta	"	2.00	.13	.12	.13	.12	.12	.12
Andes	"	3 00	.08	08	.08	07	.07	7
Belcher	"	3 00	.21	24	.21	21	.24	22
Best & Belcher	"	3 00	.39	.39	.39	42	.45	.42
Bullion	"	1 00	.05	.04	.05	.....	03	04
Caledonia	"	3 00	.....	.....	21	.21	.21	21
Challenge Con.	"	3 00	.18	.16	16	17	.16	18
Chollar	"	3 00	.26	.26	.25	.25	.30	25
Confidence	"	2 00	.70	70	.....	.62	.68	68
Con. California & Virginia	"	2 50	1.35	1 35	1.35	1 30	1 35	1 30
Cons. Imperial	"	1 00	.01	.01	.01	.01	.01	.01
Cons. New York	"	1 00	.....	.....	.....	.....	.....	.....
Crown Point	"	3 00	.19	.18	.19	.17	.17	.17
Exchequer	"	1.00	.....	.....	01	.....	01	.....
Gould & Curry	"	3 00	16	16	.27	27	29	28
Hale & Norcross	"	1 00	1 55	1.55	1.60	1.60	1 70	1.58
Julia Con.	"	1 00	.01	.01	01	.01	.....	.01
Justice	"	2.00	.18	.18	17	.17	.18	20
Kentuck Con.	"	1.00	.....	.05	05	.06	.06	06
Mexican	"	3.00	.31	.29	.32	32	35	.33
Occidental Con.	"	3.00	.65	.65	.68	80	94	92
Ophir	"	3.00	70	69	.66	65	.67	63
Overman	"	2 00	.03	03	.02	02	.03	03
Potosi	"	3 00	.27	26	26	25	27	26
Savage	"	2 50	19	19	18	17	.19	19
Scorpion	"	1 00	.....	.....	.02	02	03	03
Sierra Nevada	"	3 00	1.30	1 30	1.35	1 25	1 25	1.20
Silver Hill	"	1.00	.....	.....	.....	.....	.....	.....
Standard	Cal.	10)	1.70	1.70	1.70	1.75	1.80	1 75
Union Con.	Nev.	2.50	.28	.27	25	26	.27	23
Utah Con	"	1 00	12	14	.16	15	15	.14
Yellow Jacket		3.00	.19	18	.17	.18	18	.18

Official telegraphic quotations, San Francisco Stock Exchange

ROSSLAND, BRITISH COLUMBIA.*

Nov. 30.

NAME OF COMPANY.	No. of shares.	Par value	Selling price.	NAME OF COMPANY.	No. of shares.	Par value	Selling price.
Brandon & Gold. Cr.	1,500,000	$1	$0 25	Lerwick	500,000	$1	.....
Brit. Amer. Corp'at'n	7,500,000	5	4 00	Lily May	1,000,000	1	$0.15
Brit Col. Corpor tion	1,500,000	2½	.....	Lon.&Van.Fin.Dev.Co	500,000	5	.....
Canadian Gold Fields	30,000,000	0 10	.....	London B. C Gold F.	250,000	5	.....
Cariboo	1,500,000	1	1 10	Monte Cristo	1,000,000	1	.....
Commander	5 0,000	1	08	New Gold Fields, B.C.	250,000	1	3 75
Deer Park	1,000,000	1	20	Novelty	1,000,000	1	06
Dundee	1,000,000	1	35	Queen Bess Prop.	120,000	5	.....
Evening Star	1,000,000	1	.....	Rambler Cariboo	1,000,000	1	.17
Fern	200,0 0	¼	85	Reco	1,200,000	1	1.75
Gold Fields of B.C	3,000,000	3¾	4 00	Red Mt.View	1,000,000	1	.....
Hall Mines	250,0 0	5	3 75	St. Elmo	1,000,000	1	.....
Hattie Brown	1,000,000	1	.....	St. Paul	1,000 000	1	.....
Homestake	1,000,0 0	1	05	Sarah Lee	1,000,000	1	25
Iron Colt	1,0 0 000	1	.....	Silver Queen	1,500 000	1	15
Iron Horse	1,000,000	1	.....	Slocan Star	500 00	1	2 30
Iron Mask	500,000	1	75	Vic Tr. MinesDev. Co.	25,000	5	.....
Josie	500,000	1	.....	Virginia	500,000	1	.....
Jumbo	500,000	1	.0	War eagle Con	2,000,000	1	2 85
Kenneth	1,000,000	1	25	Waverly Mines	100 000	5	.....
Keystone	1,500,000	1	25	White Bear	2,000,000	1	.10
KootenayGold Fields	20,000	.....	.....	Wild Horse	400 000	1	.....

* From Our Special Correspondent.

SHANGHAI, CHINA.‡

Oct. 24.

NAME OF COMPANY.	Country.	No. of shares.	Value. Par.	Value. Paid up.	Last dividend. Date.	Last dividend. Amount.	Price
Jelebu Mg. & Trad.	China	45,000	$5	$5	Oct., 1894	$0.25	Taels 3 28
Panjom Mg., Ltd.	"	6 ,0 0	8	5	.....	.....	" 4 38
do. pref	"	30,0 0	1	1	.....	.....	" 1 7
Sauh A'lian G. Mg	"	200,000	$1	14s. 10d	July, 1896	.51	" 26 28
Sheridan Con. M.& M.	Colorado, U.S	20,000	Taels 100	Taels 10	.....	.....	" 2.25

‡ Special Report of J. P. Bisset & Co. The prices quoted are in Shanghai taels

SALT LAKE CITY, UTAH.*

Dec. 3.

STOCKS.†	No of shares	Par val.	Bid.	Asked.	STOCKS.†	No of shares	Par val.	Bid.	Asked
Ajax	300,000	$10	$0.60	$0.62½	Homestake	400,000	$1	$ 03	$0 03½
Alice	400,000	25	.85	92½	Horn Silver	400,000	25	1 17½	1 25
Anchor	150,000	10	.91	1.30	Little Pittsburg	400,000	5	10¾	10¾
‡Brick Con	500,000	1	.....	.....	Lower Mammoth	150,000	1	63¾	64
Buckeye	500 000	1	.05½	.6	Mammoth	400,000	5	2 00	2 03¾
Bullion-Beck & Ch.	100,000	10	4 55	5 25	Mercur	200,000	25	7 50	7 87½
Centennial Eureka	80,000	50	35 50	37.50	Northern Light	400,000	5	.45½	46
Chloride Point	500, 00	...	1.15	1.16	Omaha	300,000	2	.55	58
Daisy	500,000	3	63½	.5	Ontario	150,000	100	6.60	7.25
Dalton	500,000	5	01¾	02¾	Overland	400,000	5	.....	.....
Dalton & Lark	2,500,000	1	06	.10	Richmond-An	500,000	1	04¾	06
Daly	150,000	30	1.02	1.25	Sacramento	1,000,000	5	.56¾	59
Daly West	75,000	20	4 10	5.20	Silver King	150,000	20	30 00	.....
Dexter	200,000	5	3.00	3 05	Sunbeam	250,000	1	.09¼	.10¾
Eagle	150,000	1	.08	.12	Sunshine	250,000	10	56	57¾
Emerald	300,000	1	17	18	Swansea	100,0 0	5	3.75	4 00
Four Aces	250,000	1	30¾	.31½	South Swansea	150,00	1	1 22½	1 27½
Galena	100,000	10	61	63¾	Utah	100,000	10	.85	97
Geyser-Marion	300,000	5	82	.84	Valeo	200,000	1	1.30	1 32½
Grand Central	250,000	1	7.92½	8 07½	Young America	200,000	1	50	.55

*From Our Special Correspondent. † Utah companies. ‡ Mines in Vanderbilt, Cal. Mines in Tuscarora, Nev.

HELENA MONT.*

Nov. 25.

NAME OF COMPANY.	Location.	Company's office	Par value.	Bid.	Asked.	Shares sold.	Price.
Am. Dev. & M	Idaho & Mont.	St. Paul, Minn., &Gib'rville,Id.	$5	.....	$1.00	....	.....
Bald Butte	L. & Cl'ke Co.	Helena, Mont.	1	$2 00	2 50	530	$2.00
Bi-Metallic	Granite "	St. Louis, Mo.	5	.....	.....	.....	.....
Con.T.&P'rm'n	Cœur d Alene,Id	Burke, Id.	5	50	.60	1,000	.45
Gold Mountain,	Ruby, Mont.	.....	1	.....	1.15	1.25	15,000
Helena & Frisco	Cœur d'alene	London.	5	7.00	7 50	100	8 00
Iron Mountain.	Missoula, Mont	Helena, Mont.	5	.....	.....	.....	.....
Judge	Meagher Co."	" "	1	.08	.10	116,000	.....
Merrill (Gold)	Jefferson " "	Butte "	1	.....	.....	.....	.....
Ontario	DeerLodge" "	Helena "	1	.....	.....	.....	.....
Yellowstone	Meagher " "	" "	5	.05	.07½	7,500	.05 to 07

* Special Report of Samuel K. Davis. Total shares sold, 2,600.

TORONTO, CAN.

NAME OF COMPANY.	Par val.	Dec 1. B.	Dec 1. A.	Dec. 2 B.	Dec. 2 A.	Dec 3 B.	Dec 3 A.	Dec. 5. B.	Dec. 5. A.	Dec. 6. B.	Dec. 6. A.	Dec. 7. B.	Dec. 7. A.	Sales
Ontario														
Ham Reef	$1	.14	.20	14	.19	.....	19½	.19	.19¾	.....	.19¾	.....	.....	.....
Olive	1	89	90	89	.91	89	.90	.89	90	89	90	.....	.....	.....
Stp G & C.	.	.06½	.08	.06¾	0.¾	06½	.07	06¾	.07¾	06¾	0.¾	.....	.....	3,000
British Col.														
Big Tree	1	16¾	.20	16¾	17	.16¾	17	15	17	.....	18¾	.....	.....	1,0 0
C'rib' M'K.	1	1.18	1 22	1 16¾	1 23	1 15¾	1.20	.....	1 20	1 12	1 18	.....	.....	100
Command'r	1	.....	.12¾	.....	.12¾	.11	12¾	.....	.12¾	.....	.12¾	.....	.....	.....
Deer Park	1	.19	20¾	18	23	.8	.20	18¾	19¾	19	19¾	.....	.....	18,900
Dundee	1	.....	.35	.22	35	30	.35	.....	35	.....	.36	.....	.....	4,500
Even'g Star	1	.....	.....	.05	06	.....	.05	.....	0	04¾	06	.....	.....	.....
Giant	1	.....	07¾	.....	.8	.....	08	.....	08	.03	04	.....	.....	.....
Gold. Cache	1	.05¾	.8	.5	.8	05¾	07	.06¾	09	05	.08	.....	.....	2,000
Grand Prize	1	.....	04	.....	04	.....	04	.....	.....	.....	.....	.....	.....	.....
Iron Mask	1	.....	75	74	.78	74¾	.75	.72	78	.....	13	.....	.....	1,200
Minnehaha	1	.18	.24¾	18	22	18	22	18	.22	.....	22	.....	.....	12,50
Monte Cristo	1	12¾	.14¾	12¾	14	12	.13	.2	.13	10¾	12	.....	.....	50,5.0
Noble Five	1	.16	.18¾	16	.20	16	.20	.16	.20	15	.18	.....	.....	.....
N'rt'n Belle	1	.....	.....	.....	.....	.....	.....	.....	.....	.4	05	.....	.....	500
Novelty	1	.04	.05	04	.05	.04	.05	.04	05	04	05	.....	.....	4,000
Silver Bell	1	.05	.06	05¾	.6¾	.....	.05	.....	.05	.....	.15	.....	.....	5,00
Smuggler,g.	1	17¾	18¾	17	18	18¾	19¾	17	.20	17	19	.....	.....	5,000
Van Anda	1	03¾	.5	04	06	.4	.5	.04	06	04	06	.....	.....	18 000
Victory Tri	1	06	10	06	.7	06	.10	.....	10	.6	.9	.....	.....	1,5.0
Virginia	1	36	45	.....	.55	40	45	.....	49	37	46	.....	.....	.....
War eagle	1	2 90	2.94	2 94	2.95¾	2.94	2 98	.....	2 94	2.90	2 94	.....	.....	.....
White Bear	1	.06½	07	06¾	07¾	06¾	07¾	06¾	.08	.6¾	07¾	.....	.....	8,500
Winchester	¼	.....	.12	09	.12¾	09	12¾	.09	.11	.....	.....	.....	.....	.....
Develop Co:														
B.C.Gold F.	1	.05	.06	.5	06	.5	06	.05	.06	.04¾	.6	.....	.....	6,200
Can. G. F. S	1	.04	07	.04¾	07	05	08	.05¾	.8	05¾	08	.....	.....	1,000

Total sales, 138,45 shares.

MEXICO.

Dec. 1.

NAME OF COMPANY.	No. of shares.	Last div'd.	Prices. Op'g	Prices. Cl'g.	NAME OF COMPANY.	No. of shares	Last div'd	Prices Op'g	Prices Cl'g
Chihuahua:					Hidalgo:				
Gloria	1,500	.....	$60	$50	Real del Monte	2,554	10 00	780	800
Durango:					San Francisco	6,000	2.00	28	270
Barradon y Cab	2,400	.....	150	150	San Rafael y An	1,200	10 00	1,000	980
Candelaria de Pan.	1,200	.....	20	20	do aviado	1,200	10 00	500	460
Capuzaya	2,400	.....	10	50	do. del Oro	3,000	.....	20	15
Penoles	2,500	30.00	2,000	2,000	Soledad	960	5 00	400	380
Restauradora	10,000	.....	20	20	Sorpresa	960	5 00	350	300
Rosario y Anexas.	4,800	.....	30	20	Union	2,400	4 00	300	350
Guanajuato.					Mexico:				
Angustias	2,400	10.00	320	310	Coronas	500	.....	75	75
Cinco Senores y An	2,000	15.00	430	450	Esperanza y An.	3,000	10 00	1,350	1,400
El Oro	5 0	.....	30	30	Michoacan				
do. pref.	2,000	.....	30	30	Luz de Borda ava	3,000	.....	12	18
Guadalupe	10,000	2.00	220	240	do aviado	1,000	.....	20	18
Trinidad, aviador	2,000	.....	125	110	Pueblo:				
do. aviado	40	.....	11	10	Tlauzingo	2,400	.....	40	27
Zona Minera de Paz	2,400	.....	.5	90	S. Luis Potosi:				
Hidalgo:					Concep. y An.	3,000	.....	9	150
Amistad y Concord.	9,600	1,38	25	.8	Sta. Mariadela Paz	2,400	10 00	700	715
arevalo	720	.....	200	200	Zacatecas.				
Bartolome de Med.	2,000	2.00	90	80	Asturiana y An	2,500	10.00	90	110
Carmen	1,000	7.75	501	500	Cabezon	2,400	.....	20	15
Luz de Maravillas.	1,100	.....	150	160	C'delar. de Pinos.	2,500	.....	180	160
Rebellon	1,000	27.89	40	20	Palma de Somb	2,400	.....	100	100

NOTE.—In most of the older Mexican mining companies the shares have no fixed par value. The capital is formed of a certain number of shares, the total value not being named. Many newer companies have a nominal par value, usually $50 or $100. Prices are in Mexican dollars.

VALPARAISO, CHILE.‡

Oct. 22.

NAME OF COMPANY.	Location.	Capital paid.	Sh. Val paid up.	Last Div'n l. Amt	Last Div'n l. Date.	Prices. Bid.	Prices. Asked.	Prices. Last sa e
Arturo Prat, silver	Chile	$3,300,000	$100	4 p. c.	1897	16½	17	16¾
Caracoles, silver	"	315,000	100	10 "	1894	.....	.....	.....
Huantajaya (mine) silver	"	1,000,000	100	13 "	1894	.....	.....	.....
Huanchaca, silver	Bolivia,	8,000,000	25	8 "	1895	30	31	31
Oruro, silver	Chile	800,000	200	.....	.....	240	350	240
Todos Santos, silver	"	2,000,000	100	1 "	1895	6	10	5
Agua Santa nitrate	"	3,000,000	50	2 "	1898	160	162	160
Antofagasta, nitrate	"	2,000,000	200	3 "	1898	130	135	130
Soc Internacional, nitrate	"	1,500,000	60	.....	.....	.....	.....	.....
Union, nitrate	"	3,000,000	200	.....	.....	65	68	65

‡ Special Report of Jackson Bros. Values are in Chilean pesos or dollars

STOCK QUOTATIONS.

LONDON.

Nov. 25.

NAME OF COMPANY.	Country.	Authorized capital.	Par value.	Last dividend. Amt.	Last dividend. Date.	Quotations. Buyers	Quotations. Sellers
			£ s. d.	s.d.		£ s. d.	£ s. d.
Alaska-Mexican, g	Alaska	£200,000	1 0 0	0 4.8	Nov., 1898	1 2 6	1 7 6
Alaska-Treadwell, g	"	1,000,000	1 0 0	1 6	" "	4 10 0	4 15 0
Anaconda, c., s	Montana	6,000,000	5 0 0	5 1¾	Nov., "	5 11 3	5 13 9
Cariboo, g f, pref	British Col'mbia	160,000	1 0 0	.....	.....	15 0	1 0 0
Chiapas, g., s., c	Mexico	252,500	1 0 0	.....	.....	5 0	7 0
Con. Gold Fields	"	300,000	1 0 0	.....	.....	10 0	15 0
De Lamar, g., s	Idaho	400,000	1 0 0	6	May, 1898	4 6	5 6
Elkhorn Priority (New), s	Colorado	87,500	1 0 0	1 0	June, 1898	1 3	3 9
Golden Gate, g	California	80,000	1 0 0	.....	.....	2 6	5 0
Grand Central, g., s	Mexico	300,000	1 0 0	2 0	Dec., 1898	1 18 9	1 16 3
Hall Mines, c., s	British Col	250,000	1 0 0	1 0	May, 1898	11 3	13 9
Lillooet, F. R. & Car., g	" "	300,000	1 0 0	.....	.....	5 0	10 0
Montana, g., s	Montana	660,000	1 0 0	0 3	May, 1898	7 6	8 0
Mountain Copper	California	1,250,000	5 0 0	2 6	Sept., 1898	4 17 6	5 2 6
Pumas-Eureka, g	"	281,250	1 0 0	0 6	Oct., 1896	2 0	3 0
Richmond, g., s., l	Nevada	270,000	5 0 0	1 0	Dec., "	6 3	8 9
Sierra Buttes, g	California	245,000	2 0 0	0 6	Apr., "	1 6	2 6
Colomb. Hydraulic, g	Colombia	75,000	1 0 0	6	Oct., 1898	13 9	16 3
Copiapo, c	Chile	300,000	2 0 0	2 0	June, 1898	2 12 6	2 15 0
Frontino & Bolivia, g	Colombia	140,000	1 0 0	1 6	Oct., 1898	2 1 3	2 3 9
*St. John del Rey, g	Brazil	600,000	1 0 0	0 6	July, 1898	1 6 6	1 7 6
Tolima A., s., g	Colombia	70,000	5 0 0	5 0	July, 1897	1 5 0	1 15 0
Tolima R., s., g	"	30,000	5 0 0	5 0	" "	15 0	1 5 0
Utah Con., g	Utah	800,00	1 0 0	rts.	Mar., 1898	3 6	3 8 9
Linares, i	Spain	45,00	3 0 0	12 6	Sept., 1898	8 10 0	9 0 0
Mason & Barry, c., sul	Portugal	630,000	5 0 0	4 0	Oct., 1898	3 0 0	3 5 0
Rio Tinto, c	Spain	1,625,000	5 0 0	£1	Nov., 1898	30 2 6	31 5 0
" pref	"	1,625,000	5 0 0	2 6	May, 1898	5 18 9	6 1 3
Tharsis, c	"	1,350,000	2 0 0	10 0	" 1898	7 7 6	7 12 6
Assoc. Gold Mines	W. Australia	500,000	1 0 0	2 0	July, 1898	2 2 6	2 5 0
Broken Hill Prop., s	N.S. Wales	384,000	8 0	1 6	Oct., 1898	2 2 6	2 5 0
*Great Boulder, Prop	W. Australia	1,750,000	2 0	6	July, 1898	1 0 3	1 0 9
Hannan's Brownhill, g	"	110,000	1 0 0	7 6	Nov., 1898	7 5 0	7 7 6
Harquahala	"	300,000	1 0 0	6 6	Nov., 1898	3	3 9
Ivanhoe Gold Corp	"	1,00 ,000	5 0 0	.....	.....	6 10 0	6 12 6
Kalgurlie, g	"	120,000	1 0 0	.....	.....	6 2 6	6 5 0
Lake View Consols, g	"	250,000	1 0 0	10 0	Apr., 1898	9 8 9	9 11 3
Mt. Lyell M. & R., l., c	Tasmania	900,000	3 0 0	2 6	Jan., 1899	6 15 0	7 9 0
Mt Morgan, g	Queensland	1,000,000	1 0 0	7	Nov., 1898	5 0 0	5 2 6
Waihi g	New Zealand	330,000	1 0 0	2 0	Dec., 1898	4 6 3	4 8 9
West Aust. Jt. Stk. Lin. & F	W. Australia	1,000,0	1 0 0	1 0	" 1898	8 9	9 0
Champion Reef, g	Colar Fields	220,0 0	10 0	3 6	Sept., 1898	4 11 3	4 13 9
Coromandel, g	"	140,000	10 0	1 0	Aug., 1898	1 18 9	2 1 3
Mysore Gold, g	"	250,000	1 10	5 0	Nov., 1898	4 17 6	5 0 0
Nundydroog, g	"	242,000	0	3 4	" 1898	3 13 9	3 16 3
Ooregum, g	"	145,000	1 0	1 0	Dec., 1898	3 5 0	3 7 6
" pref. g	"	120,000	1 0	1 0	" 1898	3 16 3	3 18 9
Angelo, g	Transvaal	275,000	1 0	5 0	Apr., 1898	6 0 0	6 2 6
*Bonanza, g	"	200,000	1 0	10 0	June, 1898	4 10 0	4 15 0
British S. Af., chartered	So. Africa	3,750,000	1 0	rts.	Apr., 1898	2 17 6	3 0 0
Cape Copper, c	"	600,000	1 0	7 0	Jan., 1899	5 8 9	5 11 3
" pref	"	150,000	2 0	7 0	" 1899	5 2 6	5 7 6
City & Suburban (New), g	Transvaal	1,360,000	2 0	8 0	Aug., 1898	5 8 9	5 11 3
Con Deep Level, g	"	260,000	4 0	0 xb.	Apr., 1898	3 0 0	3 5 0
Crown Reef, g	"	120,000	1 0	1 (18 0	Nov., 1898	13 15 0	14 0 0
De Beers Con., d	Cape Colony	3,950,000	1 0	0 £1	June, 1898	25 6 3	25 8 9
Durban Roodepoort, g	Transvaal	135,000	5 0	4 0	Sept., 1898	5 12 6	5 17 6
Ferreira, g	"	90,000	1 0	0 30 0	Aug., 1898	24 5 0	24 15 0
Geldenhuis Deep, g	"	350,000	1 0	0 6 0	" 1898	9 7 6	9 12 6
Geldenhuis Est, g	"	200,000	1 0	0 2 0	Nov., 1898	7 11 3	7 13 9
Ginsberg, g	"	160,000	1 0	0 4 0	Aug., 1898	3 0 0	3 2 6
Henry Nourse, g	"	125,000	1 0	0 15 0	" 1898	9 17 6	9 12 6
Heriot (New), g	"	115,000	1 0	0 5 0	Nov., 1898	7 7 6	7 12 6
Jagersfontein, d	Orange Fr. St	1,000,000	1 0	0 6 0	Sept., 1898	9 10 0	9 12 6
Johannesburg Con. Invst	So. Africa	2,750,000	1 0	0 2 0	Aug., 1897	4 2 6	4 5 0
§Jubilee, g	Transvaal	50,000	1 0	0 5 0	Nov., 1898	10 15 0	11 5 0
Jumpers, g	"	100,000	1 0	0 6 0	Aug., 1898	5 0 0	5 5 0
Kleinfontein, g	"	275,000	1 0	0 rts.	Apr., 1898	2 11 3	2 13 9
Langlaagte Estate, g	"	500,000	1 0	0 3 0	Sept., 1898	3 0 0	3 2 6
May Con. (New), g	"	275,000	1 0	0 2 0	Jan., 1897	3 3 9	3 6 3
Meyer & Charlton, g	"	85,000	1 0	0 5 0	Aug., 1898	4 15 0	5 0 0
Namaqua, c	Cape Colony	200,000	1 0	0 3 6	July, 1898	2 17 6	3 0 0
Primrose (New), g	Transvaal	300,000	2 0	0 5 0	Aug., 1898	4 5	4 7 6
Rand Mines, g	So. Africa	400,000	1 0	0	.....	32 6 3	32 8 9
Robinson, g	Transvaal	2,750,000	1 0	0 7 0	Aug., 1898	8 12 6	8 17 6
Sheba, g	"	1,100,000	1 0	0 0 6	July, 1898	1 7 6	1 8 9
Sim. & Jack Prop., g	"	5,000,000	5 0	0 3 6	Dec., 1898	5 0 0	5 2 6
Sim. & Jack West, g	"	400,000	1 0	0	.....	2 16 3	2 18 9
Sim. & Jack East, g	"	70,0 0	1 0	0	.....	2 16 3	2 18 9
Wemmer, g	"	80,000	1 0	0 18 0	Nov., 1898	11 10 0	11 15 0
Wolhuter, g	"	80,000	1 0	0 6 0	Aug., 1898	5 0 0	5 2 6
Worcester, g	"	100,000	1 0	0 3 0	Oct., 1898	2 15 0	3 0 0

* Dividend pending. § Rights or bonus pending.

PARIS.

Nov. 17.

NAME OF COMPANY	Country.	Product.	Capital Stock.	Par value.	Latest divs.	Prices. Op'ning.	Prices. Closing.
			Francs.	Fr.	Fr.	Fr.	Fr.
Acieries de Creusot	France	Steel mfrs.	27,000,000	2,000	75.00	2,145.00	2,175.00
" " Firminy	"	" "	3,000,000	500	85.00	3,220.00	3,125.00
" " Fives-Lille	"	" "	12,000,000	500	85.00	545.00	548.50
" " Huta-Bank	Russia	Iron & steel	.....	500	.....	4,577.00	4,445.00
" " la Marine	France	Steel mfrs	20,000,000	500	40.00	1,588.00	1,592.00
" " Longwy	"	" "	.....	500	85.00	1,040.00	1,200.00
Anzin	"	Coal	.....	.....	190.00	5,550.00	5,600.00
Blache-St. Vaast	"	Steel	.....	1,000	160.00	3,800.00	3,800.00
Bolco	Lower Cal.	Copper	.....	500	93.50	1,385.00	1,385.00
Briansk	Russia	Coal & Iron	.....	500	.....	1,275.00	1,275.25
Bruay	France	Coal	3,000,000	400	900.00	38,500.00	38,500.00
Cape Copper	S. Africa	Copper	15,000,000	50	1.50	143 57	144 50
Champ d'Or	"	Gold	3,375,000	25	.....	50.00	49.00
Courrieres	France	Coal	600,000	900	60.00	2,160.00	2,175.00
De Beers Consolidated	S. Africa	Diamonds	98,750,000	125	15.63	650.00	644.50
Denain-Anzin	France	Steel	.....	500	30.00	795.00	790.00
Dombrowa	Russia	Coal	.....	500	12.50	970.00	980.00
Donetz	"	Steel	.....	.....	.....	1,060.00	1,060.00
Dourges	"	Coal	.....	1,000	300.00	21,850.00	21,672.00
Dynamite Centrale	France	Explosives	.....	500	12.50	515.00	514.00
Eplnac	"	Coal	.....	2,500	20.83	600.00	600.00
Escombrera-Bleyberg	Spain	Lead	.....	500	85.00	1,695.00	1,677.00
Fraser River	Brit. Col'mb	Gold	250,0.0	25	.....	8.50	8.25
Huanchaca	Bolivia	Silver	40,000,000	125	5.00	49 00	49 00
Langlaagte Estate	S. Africa	Gold	11,750,000	25	11.25	79.00	78.00
Lazunas	Chile	Nitrates	16,250,000	125	12.50	80.0	80.0
Laurium	Greece	Zinc & lead	16,300,000	500	30.00	620.00	615.00
Lautaro	Chile	Nitrates	13,750,000	125	.....	105.00	100.00
Malfidano	Italy	Zinc	12,500,000	500	40.00	1,140.00	1,145.00
Metaux, Cie. Fran. de	France	Metal d'lers.	25,000,000	500	30.00	660.00	657.00
Mokta-el-Hadid	Algeria	Iron	18,312,500	500	40.00	1,080 00	1,081.00
Napthe Baku	Russia	Petroleum	.....	.....	.....	686.0	7 0.00
Napthe, Le	"	"	.....	.....	.....	2,625.00	2,600.00
Napthe Nobel	"	"	.....	.....	.....	512.0	525.0
" parts	"	"	.....	.....	.....	10,300.00	10,450.00
Nickel	N. Caled'nia	Nickel	6,360,000	500	30.00	310.00	305.00
Paccha-Jazpampa	Chile	Nitrates	9.000.000	125	.....	12 5	12.50
Penarroya	Spain	Coal, etc.	.....	500	65.00	2,550 0	2,451.00
Rebecca	Colo'do, U.S.	Gold	5,000,000	25	.....	4 50	4.50
Rio Tinto	Spain	Copper	40,625,000	125	47.70	788.0	776.00
" " preferred	"	"	40,625,000	125	.....	135.00	151.00
Rive-de-Gier	France	Coal	.....	.....	.....	23 00	22.00
Robinson	S. Africa	Gold	68,750,000	125	12.50	221.50	225.00
St. Etienne	France	Coal	.....	.....	18.00	463.00	463.50
Salines de l'Est	France	Salt	.....	500	11.50	250.00	250.0
Salines du Midi	France	" etc	.....	500	20.00	925.0	925.00
Sels Gem. de la Rus. Mer	Russia	" etc	.....	500	25.00	517.0	505.00
Tharsis	Spain	Copper	33,750,000	50	6.75	199.50	196.50
Vicoigne-Neux	France	Coal	.....	1,000	700 00	23,855.0	23,800.00
Vielle Montagne	Belgium	Zinc	9,000,000	80	3.00	740.0	747.50

MEETINGS.

NAME OF COMPANY.	Location	Meeting.	Date.	Place.
American Coal	Maryland	Annual.	Dec. 29	1 Broadway, New York City.
Andes	Nevada	"	Dec. 19	309 Montgomery street, San Francisco, Cal.
Arcadia	Colorado	"	Jan 6	Colorado Springs, Colo.
Combination	Montana	"	Jan. 12	Butte Montana.
Consolidation Coal	Maryland	"	Dec. 14	Baltimore, Md
Copper Queen Con	Arizona	"	Dec 17.	Salt Lake City, Utah.
Eureka Con	Nevada	Special	Dec. 20	310 Pine street, San Francisco, Cal.
Geyser	Colorado	Annual.	Dec 10.	Silver Cliff Colo.
Gould & Curry	Nevada	"	Dec. 20	309 Montgomery street, San Francisco, Cal.
Head C. & Tr.	California	"	Dec. 13.	310 Pine street, San Francisco, Cal.
Mt. Diablo	California	"	Dec. 20	310 Pine street, San Francisco, Cal.
N.Y. Hond., Rosario	Mexico	"	Dec 14.	35 Broadway, New York City.
New Zealand	Colorado.	Special.	Dec. 15	Room 3, Hughes Block, Denver Colo.
Santa Rosalia	California	Annual.	Dec. 15	310 Pine street, San Francisco, Cal.
Tintic	Utah	Special.	Dec 13.	314 Atlas Block, Salt Lake City, Utah.
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DIVIDENDS.

NAME OF COMPANY.	Current dividends. Date.	Current dividends. Am't.	Paid since Jan. 1, 1898.	Total to date.
Ætna Con	.....	.....	$30,000	$150,000
Alaska-Mexican	.....	.....	90,000	347,031
Alaska Treadwell	.....	.....	375,000	3,925,000
Alice, Mont	.....	.....	20,000	1,075,000
American Gold	.....	.....	54,000	362,000
†Anchoria-Leland	.....	.....	66,000	168,000
†Anaconda Copper	.....	.....	3,000,000	8,250,000
Argonaut	.....	.....	180,000	180,000
†Associated, Colo	.....	.....	50,000	50,000
Atlantic	.....	.....	40,000	780,000
Aurora Iron	.....	.....	50,000	750,000
†Boston & Montana	.....	.....	1,950,000	9,125,000
†Bald Butte	.....	.....	82,500	634,648
Breece	Dec. 1	$10,000	10 000	30,000
†Bull.-Beck & Ch'n	.....	.....	80,000	2 318,400
†Bunker Hill & S	Dec. 5	21,000	228,000	600,000
Calumet & Hecla	Dec. 29	1,000,000	5,000,000	55,850,000
†Central Lead	Dec.	5,000	54,000	82,000
Charleston, S. C	Dec. 1	150,000	30,000	180,000
Colorado Sm	.....	.....	250,000	1,845,000
Crowned K., Ariz	.....	.....	96,000	208,000
†Deer Trail, Wash	.....	.....	5,000	5,000
De Lamar	.....	.....	115,200	2,451,600
†Elkton, Con	.....	.....	220,000	655,961
†Empire State Ida	.....	.....	49,587	49,587
Enterprise, Colo	.....	.....	50,000	900,000
Florence, Mont	.....	.....	5 000	137,530
Geyser Marion	.....	.....	33,000	96 000
†Gold Coin, Vict	.....	.....	110,000	130,000
†Golden Cycle	.....	.....	55,000	153,300
Golden Reward	.....	.....	15,000	155,000
†Grand Central, Ut	Dec. 10	31,250	218,750	218,750
†Highland	.....	.....	220,000	3,764,718
Hope of St. Louis	.....	.....	20,000	762,252
Holy Terror	.....	.....	81,000	117,000
†Homestake	.....	.....	573,750	7,118,750
Horn Silver	.....	.....	60,000	5,210,000
Iron Mountain	.....	.....	10,000	507,500
Iowa	.....	.....	15,000	95,000
Jamison	.....	.....	39,000	39,000
Jersey Leas. Colo	.....	.....	11,072	11,072
Lillie	.....	Dec. 1	$12,500	$141,500	$158,610
Mammoth	.....	Dec. 1	20,000	2 0.000	1.350,000
†Mercur	.....	.....	.....	330,000	1,216,000
Minnesota Iron	.....	.....	.....	990,000	4,735,000
†Modoc	.....	Dec. 24	10,000	90,000	100,000
Montana, Lt'd	.....	.....	.....	35,610	2,997,557
Mont. Ore Pur	.....	.....	.....	160,000	800,000
†Moon-Anchor	.....	.....	.....	150,000	261,0 0
Morning Star	.....	.....	.....	69,600	666,600
Mt. Rosa	.....	.....	.....	20,0 0	60,000
Mountain Copper	.....	.....	.....	31,250	93,750
Napa Con	.....	.....	.....	60,000	950.00
New Idria	.....	.....	.....	50,000	80,000
†N. Y. & Hond. R	.....	Dec. 20	15,000	120,000	975.000
North Star, Cal	.....	.....	.....	50,000	500,000
Osceola	.....	Dec 20	200,000	3 0,000	2,522,500
Parrot	.....	Dec. 1	60,000	413,910	2,138,898
†Pennsylvania	.....	Dec.	2,575	28,325	51,650
Pioneer	.....	Dec. 15	12,500	50,000	50,000
†Portland	.....	.....	.....	510,000	2,167,080
Quincy	.....	.....	.....	650,000	10,120,080
Raven	.....	.....	.....	20,000	20,000
†Republic, Wash	.....	Dec. 10	30,000	90,000	90,000
Sacramento	.....	.....	.....	40,000	57,000
†Silver King	.....	Dec. 10	37,500	450,000	1,800,000
Small Hopes	.....	.....	.....	25,000	3,300,000
†Smuggler	.....	.....	.....	110,000	1,085,000
So. Eureka, Cal	.....	.....	.....	12,000	12,000
South Swansea	.....	.....	.....	30,000	104,950
St. Joseph Lead	.....	Dec. 21	37,500	112,500	2,784,500
Standard Con	.....	.....	.....	27,0.0	5,674,940
†Strong	.....	Dec.	25,000	175,000	445,000
†Swansea	.....	Dec 10	10,000	65,000	136,500
Tamarack	.....	Dec. 28	240,000	440,000	5,570,000
Victor	.....	Dec. 1	100,000	350,000	1,155,000
Vindicator	.....	.....	.....	137,875	137,875
†War Eagle, B. C	.....	Dec. 15	26,250	177,750	177,750
Wolverine	.....	.....	.....	60,000	60,000
†Yellow Aster	.....	.....	.....	119,000	158,789
Totals	.....	.....	$2,065,075	$20,697,209	164,028,038

† November dividend paid.

ASSESSMENTS.

NAME OF COMPANY.	Location.	No.	Delinq.	Sale.	Amt.
Alta	Nev	60	Nov. 22	Dec. 20	.05
Alpha	"	21	" 28	" 19	.03
Alaska	Utah		Dec. 13	" 27	.01
Arrastraville	Cal	2	" 17	Jan. 17	.10
Best & Belcher	Nev	65	Nov. 21	Dec 13	.10
Confidence	"	31	" 23	" 14	.10
Con. St. Gothard	Cal	16	Dec. 14	" 30	.10
†Eureka C. Drift	Cal	14	Nov. 25	" 11	.05¼
Gould & Curry	Nev	85	Dec. 8	" 29	.10
Great West. Q	Cal	4	" 16	Jan. 16	.15
May Day	Utah		Jan. 3	" 22	.00¼
Mexican	Nev	60	Nov. 22	Dec. 13	.10
Morgan (Mec'rs)	Utah	2	Dec. 12	Jan. 5	.03
Mt. Diablo	Nev	6	" 28	" 20	.10
No. Gould & Curry	Nev	21	Dec. 20		.10
Occidental Con	"	31	" 3	Dec. 28	.10
Omaha Con	Cal	3	Nov. 12	" 10	.50
Overman (New)	Nev	1	Dec. 14	Jan. 4	.05
Potosi	"	51	" 5	Dec 28	.10
Reward	Cal	7	Nov. 21	" 12	.002
South Eureka	Cal		Dec. 16		.03
*Troy	Alaska	5	" 27	Jan. 11	.05¼
*Union Con	Nev	57	Jan. 3	" 23	.03

* New assessment. † Former assessment rescinded.

DIVIDEND-PAYING MINES.

	Name and Location of Company.		Capital Stock.	Shares. No.	Shares. Par Val	Assessments. Total Levied.	Assessments. Date and Amount of Last.			Dividends. Total Paid.	Dividends. Date and Amount of Last.		
1	Adams, s. l. c.	Colo..	$1,500,000	150,000	$10	*	.....	.....	.....	$693,500	Oct..	1895	.04
2	Ætna Cons., q.	Cal..	500,000	100,000	5	*	.....	.....	.....	150,000	Oct..	1898	.10
3	Alaska-Mexican, g.	Alask	1,000,000	200,000	5	.....	.....	.....	.....	299,031	July..	1898	.10
4	Alaska-Treadwell, g.	Alask	5,000,000	200,000	25	*	.....	.....	.....	3,550,000	July..	1898	.37½
5	Alice, g. s.	Mont.	10,000,000	400,000	25	*	.....	.....	.....	1,075,000	April.	1898	.05
6	American Gold, g. s. c. l	Colo..	3,000,000	300,000	10	*	.....	.....	.....	362,000	Oct..	1898	.09
7	Anaconda Copper	Mont.	30,000,000	1,200,000	25	*	.....	.....	.....	8,250,000	Nov.	1898	1.25
8	Anchoria-Leland, g.	Colo..	600,000	600,000	1	*	.....	.....	.....	168,000	Nov..	1898	.01
9	Argentum Juniata, g. s. l	Colo..	2,600,000	1,300,000	2	*	.....	.....	.....	39,000	July..	1895	.03
10	Associated, g.	Colo.	1,250,000	1,250,000	1	*	.....	.....	.....	50,000	Nov..	1898	.01
11	Atlantic, c.	Mich.	1,000,000	40,000	25	*	.....	.....	.....	780,000	Feb..	1898	1.00
12	Aurora, i.	Mich.	2,500,000	100,000	25	*	.....	.....	.....	750,000	May..	1898	.50
13	Bald Butte	Mont.	250,000	250,000	1	*	.....	.....	.....	627,148	Oct..	1898	.03
14	Bangkok-Cora Bell, s. l.	Colo..	600,000	600,000	1	.....	.....	.....	.....	107,510	July..	1896	.01
15	Big Six, g. s.	Colo..	500,000	500,000	1	.....	.....	.....	.....	15,000	May..	1898	.00½
16	Boston & M. Cons., g. s. c	Mont.	3,750,000	150,000	25	*	.....	.....	.....	9,125,000	Nov..	1898	5.00
17	Breece, i.	Colo..	5,000,000	200,000	25	.....	.....	.....	.....	30,000	Dec..	1898	.05
18	Bullion Beck & Champ.	Utah.	1,000,000	100,000	10	*	.....	.....	.....	2,308,400	Oct..	1898	.10
19	Bunker Hill & S., s. l.	Idaho	3,000,000	300,000	10	.....	.....	.....	.....	579,000	Nov..	1898	.07
20	Calumet & Hecla, c.	Mich.	2,500,000	100,000	25	.....	.....	.....	.....	54,850,000	Sept..	1898	10.00
21	Cariboo, g.	B. C..	800,000	800,000	1	.....	.....	.....	.....	236,965	Aug..	1898	.02
22	Centen'l Eureka, g. s. l. c	Utah.	1,500,000	30,000	50	30,000	Mar..	1889	1.00	2,010,000	Mar..	1897	1.00
23	Central Lead, l.	Mo...	1,000,000	10,000	100	*	.....	.....	.....	77,000	Nov..	1898	.50
24	Champion, g. s.	Cal..	340,000	84,000	10	.....	.....	.....	.....	296,200	April.	1898	.25
25	Charleston, p. r.	S. C..	1,000,000	10,000	100	*	.....	.....	.....	165,000	Sept..	1898	1.50
26	Colorado, Sm., g. s. c	Mont.	1,000,000	100,000	10	*	.....	.....	.....	1,595,000	July..	1898	.50
27	** †Cons. Cal. & Va	Nev..	540,000	216,000	2½	678.000	July..	1898	.25	3,894,000	Feb..	1895	.25
28	Coptis, g. s.	Nev..	10,000,000	100,000	100	.....	.....	.....	.....	77,000	Feb..	1895	.01
29	Crowned King, g. s. l.	Ariz.	6,000,000	600,000	10	*	.....	.....	.....	208,000	Oct..	1898	.02
30	Dalton & Lark, s. l.	Utah.	2,500,000	2,500,000	1	.....	.....	.....	.....	87,500	Aug..	1896	.00½
31	Daly, s. l.	Utah.	3,000,000	150,000	20	.....	.....	.....	.....	2,925,000	Mar..	1897	.25
32	†Deadwood-Terra, g.	S. D..	5,000,000	200,000	25	*	.....	.....	.....	1,350,000	May..	1898	.15
33	De Lamar, g. s.	Idaho	2,000,000	400,000	5	.....	.....	.....	.....	2,451,600	May .	1898	.29
34	Della S.	Colo..	1,000,000	1,000,000	1	.....	.....	.....	.....	60,000	Jan..	1897	.10
35	Dutch, g	Cal..	1,500,000	150,000	10	.....	.....	.....	.....	39,000	Feb..	1898	.04½
36	Elkton Cons., g.	Colo..	1,250,000	1,250,000	1	.....	.....	.....	.....	636,961	Oct..	1898	.01½
37	El Paso, g. s.	Colo..	650,000	650,000	1	.....	.....	.....	.....	12,093	Jan..	1898	.01
38	Enterprise, s. l.	Colo..	500,000	500,000	1	.....	.....	.....	.....	900,000	Sept..	1898	.05
39	Empire State-Idaho	Idaho	1,000,000	100,000	10	.....	.....	.....	.....	35,000	Nov..	1898	.10
40	Fern.	B. C..	200,000	200,000	1	.....	.....	.....	.....	10,000	Jan..	1898	.05
41	Florence, s.	Mont.	2,500,000	500,000	5	*	.....	.....	.....	137,530	Aug .	1897	.01
42	Franklin, c.	Mich.	1,000,000	40,000	25	.....	.....	.....	.....	1,240,000	Jan..	1894	2.00
43	Galena, g. s. l.	Utah.	1,000,000	100,000	10	.....	.....	.....	.....	71,000	Jan..	1897	.05
44	Garfield-Grouse, g.	Colo..	1,200,000	1,200,000	1	*	.....	.....	.....	24,000	Feb..	1897	.01
45	Geyser-Marion, g.	Utah.	1,500,000	300,000	5	.....	.....	.....	.....	96,000	Sept..	1898	.02
46	Gold Coin, g. s.	Colo..	1,000,000	200,000	5	*	.....	.....	.....	160,000	Nov..	1897	.05
47	Gold Coin of Victor, g.	Colo..	1,000,000	1,000,000	1	.....	.....	.....	.....	120,000	Oct..	1898	.01
48	Golden Cycle, g.	Colo..	1,000,000	200,000	5	.....	.....	.....	.....	148,300	Oct..	1898	.02½
49	Golden Fleece, g. s.	Colo..	600,000	600,000	1	*	.....	.....	.....	569,179	Feb..	1897	.01
50	Gold & Globe, g.	Colo..	750,000	750,000	1	.....	.....	.....	.....	51,625	July..	1897	.00⅞
51	Golden Reward, g	S. D..	1,000,000	100,000	10	.....	.....	.....	.....	155,000	Feb..	1898	.15
52	Grand Central, g.	Utah.	250,000	250,000	1	.....	.....	.....	.....	187,500	Nov..	1898	.12½
53	Hall Mines, Ltd.	B. C..	1,250,000	250,000	5	.....	.....	.....	.....	160,000	May .	1898	.25
54	Hecla Cons., g. s. c. l.	Mont.	1,500,000	30,000	50	*	.....	.....	.....	2,175,000	Feb..	1897	.50
55	Helena & Frisco, s. l.	Idaho	2,500,000	500,000	5	*	.....	.....	.....	475,000	Aug..	1896	.04
56	Highland, g.	S. D..	10,000,000	100,000	100	304,000	.....	.....	.....	3,764,718	Nov..	1898	.20
57	Holy Terror, g.	S. D..	500,000	500 000	1	.....	.....	.....	.....	117,000	Sept..	1898	.03
58	Homestake, g.	S. D.	12,500,000	125,000	100	200,000	July..	1878	1.00	7,118,750	Nov..	1898	.50
59	Hope of St. Louis, s.	Mont.	1,000,000	100,000	10	*	.....	.....	.....	762,252	Mar..	1898	.10
60	Horn-Silver, g. s. c. sp. l.	Utah.	10,000,000	400,000	25	*	.....	.....	.....	5,210,000	Oct..	1898	.05
61	Idaho.	B. C..	500,000	500,000	1	.....	.....	.....	.....	264,000	May..	1898	.05
62	Iowa, g.	Colo..	1,000,000	1,000,000	1	.....	.....	.....	.....	95,000	June.	1898	.00½
63	Iron Mountain, g. s. l. i.	Mont.	5,000,000	500,000	10	*	.....	.....	.....	507,500	April.	1898	.02
64	Isabella, g.	Colo..	2,250,000	2,250,000	1	.....	.....	.....	.....	270,000	June.	1897	.00½
65	Kearsarge, c.	Mich.	1,000,000	40,000	25	190,000	Oct..	1887	1.00	160,000	Aug..	1897	1.00
66	Kennedy, g.	Cal..	10,000,000	100,000	100	.....	.....	.....	.....	1,796,000	Aug..	1898	.48
67	Last Chance, s. l.	B. C..	500,000	500,000	1	*	.....	.....	.....	40,000	Jan..	1897	.04
68	Le Roi.	B. C..	2,500,000	500,000	5	.....	.....	.....	.....	825,000	April.	1898	.10
69	§§§Lillie, g.	Colo..	1,250,000	250000	5	.....	.....	.....	.....	146,110	Oct..	1898	.01
70	Mammoth, g. s. c.	Utah.	10,000,000	400,000	25	*	.....	.....	.....	1,330,000	Nov..	1898	.05
71	Mayflower, g.	Cal..	1,200,000	60,000	20	6,000	Sept..	1898	.05	166,824	Dec..	1895	.10
72	Mercur, g.	Utah.	5,000,000	200,000	25	*	.....	.....	.....	1,191,000	Oct..	1898	12½
73	Minnesota Iron, i.	Minn.	16,500,000	165,000	100	*	.....	.....	.....	4,735,000	Oct..	1898	1.50
74	Modoc, g.	Colo..	1,000,000	1,000,000	1	.....	.....	.....	.....	110,000	Dec..	1898	.01
75	Mollie Gibson, s.	Colo..	5,000,000	1,000,000	5	20,000	Jan..	1891	.02	4,080,000	Jan..	1895	.05
76	Montana, Ltd., g. s.	Mont.	3,300,000	660,000	5	*	.....	.....	.....	2,997 557	May .	1898	.05
77	Montana Ore Purchas'g	Mont.	2,500,000	80,000	25	*	.....	.....	.....	800,000	Oct..	1898	1.00
78	Moon-Anchor, g.	Colo..	600,000	600,000	1	*	.....	.....	.....	261,000	Nov..	1898	.07½
79	Moose, g.	Colo..	600,000	600,000	1	.....	.....	.....	.....	186,000	Jan..	1896	.01
80	Morning Star, g.	Cal..	240,000	2,400	100	70,800	Feb..	1885	.75	666,600	June.	1898	5.00
81	Mt. Rosa, g.	Colo..	1,000,000	1,000,000	1	.....	.....	.....	.....	60,000	Jan..	1898	.02
82	Mountain Copper	Cal..	6,250,000	250,000	25	.....	.....	.....	.....	93,750	Sept..	1898	.62½
83	Napa Cons., q.	Cal..	700,000	100,000	7	*	.....	.....	.....	950,000	Oct..	1898	.20
84	New Idria Quicksilver	Cal..	500,000	100,000	5	.....	.....	.....	.....	80,000	Oct..	1898	.20
85	N. Y. & Hon Rosario, s. g.	C. A..	1,500,000	150,000	10	*	.....	.....	.....	945,000	Oct..	1898	.10
86	North Star, g.	Cal..	2,000,000	200,000	10	20,000	June.	1885	.02	500,000	Nov..	1898	.25
87	Ontario, s. l.	Utah.	15,000,000	150,000	100	.....	.....	.....	.....	13,557,500	Nov..	1897	.75
88	Osceola, c.	Mich.	2,500,000	100,000	25	*	.....	.....	.....	2,522,500	Dec..	1898	2.00
89	Parrot, c.	Mont.	2,300,000	230,000	10	*	.....	.....	.....	2,069,898	Oct..	1898	.30
90	Pennsylvania Cons.	Cal..	5,150,000	51,500	100	14,000	Feb..	1892	.05	46,500	Oct..	1898	.05
91	Pioneer g.	Cal..	1,000,000	100,000	10	.....	.....	.....	.....	50,000	Dec..	1898	.12½
92	Portland, g.	Colo..	3,000,000	3,000,000	1	*	.....	.....	.....	2,167,080	Nov..	1898	.02
93	Princess, g.	Colo..	1,000,000	1,000,000	1	.....	.....	.....	.....	45,000	Feb..	1897	.00½
94	Quincy, c.	Mich.	2,500,000	100,000	25	*	.....	.....	.....	10,120,000	Aug..	1898	3.50
95	Rambler-Cariboo	B. C..	1,000,000	1,000,000	1	.....	.....	.....	.....	40,000	April.	1897	.02
96	Raven, g.	Colo..	1,500,000	1,500,000	1	.....	.....	.....	.....	20,000	Mar..	1898	.01
97	Reco, s. l.	B. C..	1,000,000	1,000,000	1	.....	.....	.....	.....	297,500	Jan..	1898	.10
98	Republic, g.	Wash	1,000,000	1,000,000	1	.....	.....	.....	.....	60,000	Nov..	1898	.03
99	Sacramento, g.	Utah.	5,000,000	1,000,000	5	.....	.....	.....	.....	57,000	Sept..	1898	.00½
100	St. Joseph, l.	Mo...	3,000,000	300,000	10	*	.....	.....	.....	2,747,000	Sept..	1898	1.50
101	Santa Rosalia, g. s.	Cal..	100,000	100,000	1	.....	.....	.....	.....	125,000	Feb..	1898	.10
102	Silver King, g. s. l.	Utah.	3,000,000	150,000	20	3,000	Jan..	1897	.02	1,762,500	Nov..	1898	.25
103	Slocan Star.	B. C..	1,000,000	2,000,000	0.50	.....	.....	.....	.....	400,000	Mar..	1897	.05
104	Small Hopes, s.	Colo..	5,000,000	250,000	20	*	.....	.....	.....	3,300,000	June.	1898	.10
105	Smuggler Union, g. s.	Colo..	5,000,000	50,000	100	.....	.....	.....	.....	150,000	Oct..	1896	1.00
106	Smuggler, s. l. z.	Colo..	1,000,000	1,000,000	1	.....	.....	.....	.....	1,075,000	Oct..	1898	.01
107	South Swansea, s. l.	Utah.	150,000	150,000	1	.....	.....	.....	.....	104,960	Aug..	1898	.05
108	§Standard Cons., g. s.	Cal..	20,000,000	200,000	100	.....	.....	.....	.....	5,674,940	Aug..	1898	.10
109	Swansea, s. l.	Utah.	500,000	100,000	5	.....	.....	.....	.....	126,500	Nov..	1898	.05
110	Tamarack, c.	Mich.	1,500,000	60,000	25	.....	.....	.....	.....	5,330,000	June.	1898	3.00
111	Tomboy, g.	Colo..	2,000,000	200,000	10	*	.....	.....	.....	600,000	Dec..	1896	.10
112	Union, g.	Colo..	1,250,000	1,250,000	1	.....	.....	.....	.....	73,000	June.	1896	.01
113	Union Leasing	Colo..	500,000	500,000	1	.....	.....	.....	.....	340,000	July..	1895	.04
114	Utah.	Utah.	1,000,000	100,000	10	*	.....	.....	.....	177,000	Dec..	1897	.01
115	Victor, g.	Colo..	1,000,000	200,000	5	*	.....	.....	.....	1,155,000	Dec..	1898	.50
116	Vindicator, Cons. g.	Colo..	1,500,000	1,015,000	1	.....	.....	.....	.....	137,875	Oct..	1898	.05
117	§§ War Eagle, Cons.	B. C..	2,000,000	1,750,000	1	.....	.....	.....	.....	151,500	Nov..	1898	.01½
118	Western Mine Enterp.	Mont.	500,000	500,000	1	*	.....	.....	.....	48,680	Jan..	1898	.20
119	Whitewater.	B. C..	625,000	125,000	5	.....	.....	.....	.....	194,000	April.	1898	.32
120	Wolverine, c.	Mich.	1,500,000	60,000	25	180,000	Mar..	1895	1.00	60,000	Oct..	1898	1.00
121	Yellow Aster, g.	Cal..	1,000,000	100,000	10	* *	.....	.....	.....	148,789	Oct..	1898	.10

NON-DIVIDEND-PAYING MINES.

	Name and Location of Company.		Capital Stock.	Shares. No.	Shares. Par Val	Assessments. Total Levied.	Assessments. Date and Amount of Last.		
1	Ada Cons., s. l.	Utah.	$100,000	100,000	$1	$3,333	Nov..	1895	.01½
2	Alamo, g. c. i.	Utah.	125,000	125,000	1	937	Mar..	1898	.00¾
3	Alliance, g. s. l.	Utah.	100,000	100,000	1	200,000	Dec..	1895	.10
4	Allonez, c.	Mich.	2,000,000	80,000	25	80,000	June.	1890	1.00
5	** Alpha Cons., g. s.	Nev..	105,000	105,000	1	316,050	Nov..	1898	.03
6	** Alta, s.	Nev..	216,000	108,000	2	3,664,910	Nov..	1898	.05
7	American Quartz, g.	Cal..	1,000,000	100,000	10	1,000	Feb..	1897	.01
8	Anchor, g. s. l.	Utah.	1,500,000	150,000	10	560,000	Aug..	1893	.20
9	** Andes, g.	Nev..	300,000	100,000	3	1,195,000	Sept..	1898	.05
10	Baliol, g.	Cal..	1,000,000	100,000	10	55,000	Mar..	1898	.30
11	** Belcher, s. g.	Nev..	312,000	104,000	3	3,514,800	Nov..	1898	.10
12	Belle Isle.	Nev..	10,000,000	100,000	100	240,271	July..	1896	.10
13	Benton Con. s.	Nev..	10,800,000	108,000	100	587,023	June.	1897	.25
14	**Best & Belcher, g. s.	Nev..	362,400	100,800	3	2,589,643	Nov..	1898	.10
15	Bogan.	Utah.	1,250,000	125,000	10	26,875	Dec..	1897	.01½
16	Boston & Cp. Ck., g.	Colo..	400,000	200,000	2	20,000	Aug..	1898	.10
17	Brunswick Cons., g.	Cal..	500,000	500,000	1	160,000	July..	1897	.03
18	** Bullion, s. g.	Nev..	100,000	100,000	1	3,120,000	Nov..	1898	.05
19	Caledonia.	Nev..	300,000	200,000	3	3,210,000	Oct..	1897	.10
20	Centennial, c.	Mich.	2,500,000	100,000	25	460,000	Mar..	1898	3.00
21	Central Eureka, g.	Cal..	4,000,000	400,000	10	78,000	Nov..	1898	.03
22	**Challenge Cons, s. g.	Nev..	150,000	50,000	3	427,500	May .	1898	.10
23	** Cholar, g. s.	Nev..	336,000	112,000	3	2,048,600	Nov..	1898	.10
24	** Confidence, g. s.	Nev..	74,880	24,960	3	540,126	Nov..	1898	.10
25	**Cons. Imperial, g. s	Nev..	500,000	500,000	1	2,246,000	Nov..	1898	.01
26	** Con. New York	Nev..	100,000	100,000	1	160,500	Nov..	1898	.03
27	** Crown Point, g. s.	Nev..	300,000	100,000	3	2,970,000	Nov..	1898	.10
28	Dalton, s. l.	Utah.	2,500,000	500,000	5	7,500	Sept..	1898	.00½
29	Dexter.	Nev..	1,000,000	200,000	5	30,000	Apr..	1898	.15
30	Eagle, g. s.	Cal..	500,000	100,000	5	5,000	Dec..	1896	.05
31	Eagle, g. s.	Ore..	1,000,000	100,000	10	6,000	Oct..	1898	.01½
32	Emerald.	Utah	300,000	300,000	1	3,000	Oct..	1898	.00½
33	Eureka Cons., g. s. l.	Nev..	1,000,000	50,000	20	585,000	Sept..	1898	.20
34	Eureka Con. Drift, g.	Cal..	500,000	500,000	1	172,500	Nov..	1898	.00½
35	** Exchequer, g. s.	Nev..	1000,000	100,000	1	1,020,000	Dec..	1897	.05
36	Four Aces.	Utah.	250,000	250,000	1	5,000	Mar..	1898	.01
37	Galena.	Utah.	1,000,000	100,000	10	10,000	Oct..	1898	.10
38	Geyser, s. l.	Colo..	5,000,000	500,000	10	1,075,000	Aug..	1898	.10
39	Gold Belt, g. s.	Utah.	500,000	500,000	1	3,012	July..	1896	.00½
40	Golden Fleece Grav. g	Cal..	130,000	130	1000	56,260	Mar..	1897	2.00
41	Gold King, g.	Colo..	1,000,000	1,000,000	1	*	.....	.....	.....
42	** Gould & Curry	Nev..	324,000	108,000	3	4,614,350	Dec..	1898	.10
43	Great Eastern, g.	Utah.	1,500,000	300,000	5	5,000	Oct..	1898	.00½
44	Hale & Norcross, g. s.	Nev..	11,200,000	112,000	100	5,688,280	Apr..	1898	.10
45	Horse Shoe Bar Cons.	Cal..	6,000,000	60,000	100	82,800	Aug	1898	.10
46	Idlewild, g.	Cal..	1,000,000	100,000	10	*	.....	.....	.....
47	Iron Silver, s. l.	Colo..	10,000,000	500,000	20	*	.....	.....	.....
48	Jackson, l.	Mich.	300,000	12,000	25	*	.....	.....	.....
49	Jupiter, g.	Cal..	2,000,000	20,000	100	80,000	Feb..	1898	.20
50	** Julia Con.	Nev..	110,000	110,000	1	1,495,500	Feb..	1897	.05
51	** Justice, g. s. c.	Nev..	210,000	105,000	2	3,646,750	Nov..	1898	.10
52	Kentuck.	Utah.	600,000	300,000	2	3,000	Aug..	1898	.10
53	** Kentuck Cons., s.	Nev..	105,000	105,000	1	125,300	June.	1898	.05
54	Keystone, g.	Colo..	1,500,000	1,500,000	1	*	.....	.....	.....
55	Lacrosse, g.	Colo..	1,000,000	100,000	10	*	.....	.....	.....
56	Little Pittsburg	Utah.	2,000,000	400,000	5	14,000	Dec..	1897	.00½
57	Lower Mammoth.	Utah.	150,000	150,000	1	15,000	Oct..	1898	.05
58	Lucky Bill.	Utah.	300,000	120,000	2.50	54,600	June.	1898	.01½
59	Marguerite, g.	Cal..	500,000	50,000	10	70,000	Nov..	1898	.10
60	May Day.	Utah.	100,000	400,000	¼	4,000	Jan..	1899	.00½
61	Mayday, g. s.	Cal..	50,000	50,000	1	5,000	May..	1898	.10
62	Mayflower, g.	Colo.	1,000,000	1,000,000	1	*	.....	.....	.....
63	Merced, g.	Cal..	1,500,000	100,000	15	200,000	July..	1896	2.00
64	Meteor, s. l.	Utah.	600,000	300,000	2	3,734	Oct..	1898	.00½
65	** Mexican, g. s.	Nev..	362,400	100,800	3	2,258,720	Nov..	1898	.10
66	Monarch, g.	Colo..	1,000,000	1,000,000	1	.....	.....	.....	.....
67	Montreal.	Utah.	2,500,000	250,000	10	5,250	Nov..	1897	.00¼
68	Mt. Diablo s.	Nev..	5,000,000	50,000	100	145,000	Nov..	1896	.10
69	Nashville, g.	Cal..	115,000	11,500	10	2,000	Sept..	1898	.17
70	New Gold Hill.	N. C.	1,750,000	350,000	5	.....	.....	.....	.....
71	New Viola, s. l.	Idaho	750,000	150,000	5	*	.....	.....	.....
72	North Banner, g. s.	Cal..	1,000,000	100,000	10	21,794	Oct..	1896	.02
73	North Belle Isle, s.	Nev..	10,000,000	100,000	100	523,074	July..	1896	.10
74	No. Gould & Curry.	Nev..	100,000	100,000	1	365,000	June.	1898	.10
75	Northern Light, g.	Utah.	2,000,000	400,000	5	80,000	July..	1898	.10
76	**Occidental Cons g s	Nev..	300,000	100,000	3	475,000	Dec..	1898	.10
77	** Ophir, g. s.	Nev..	324,000	108,000	3	4,602,568	Sept.	1898	.15
78	Opohonga.	Utah.	200,000	100,000	2	1,500	June.	1898	.01
79	Oro Cache, g. s.	S. D.	1,250,000	250,000	5	6,250	July..	1893	.00½
80	Osceola, g.	Cal..	10,000,000	100,000	100	10,924	Sept..	1898	.01
81	*** Overman, g. s.	Nev..	230,400	115,200	2	4,123,930	May .	1898	.05
82	Peer, s.	Ariz.,	10,000,000	100,000	100	215,000	July..	1894	.05
83	Peerless, s.	Nev..	10,000,000	100,000	100	410,000	July..	1894	.05
84	Pine Hill, g.	Cal..	1,000,000	100,000	10	30,000	July..	1897	.05
85	** Potosi, g. s.	Nev..	336,000	112,000	3	2,157,200	Dec..	1898	.10
86	Puritan, g. s.	Colo..	1,500,000	150,000	10	*	.....	.....	.....
87	Quicksilver, pref., q.	Cal..	4,300,000	43,000	100	*	.....	.....	.....
88	Quicksilver, com. q.	Cal..	5,700,000	57,000	100	*	.....	.....	.....
89	Red Mountain, s.	Colo.	300,000	60,000	5	22,500	Mar..	1891	.12½
90	Rescue, g.	Nev..	100,000	10,000	10	4,000	June.	1898	.10
91	Reward, g.	Cal..	64,000	64,000	1	63,680	Nov..	1898	.02
92	Ridge, c.	Mich.	500,000	20,000	25	259,939	Feb..	1897	1.00
93	St. Mary, c.	Mich.	1,000,000	40,000	25	4,000	July..	1895	.05
94	** Savage, g. s.	Nev..	280,000	112,000	2½	7,208,600	Nov..	1898	.10
95	Scorpion, s.	Nev..	100,000	100,000	1	445,000	Dec..	1897	.05
96	**Seg. Belcher & M g s	Nev..	200,000	100,000	2	368,000	Nov..	1898	.03
97	Sevier, g. s.	Utah.	1,250,000	250,000	5	50,000	April.	1897	.04
98	**Sierra-Nevada, g. s	Nev..	300,000	100,000	3	6,706,910	Feb..	1898	.20
99	Silver Age, g. s. l.	Colo..	2,000,000	200,000	10	*	.....	.....	.....
100	** Silver Hill, s.	Nev..	108,000	108,000	1	2,220,200	May .	1898	.05
101	Silver King, s.	Ariz.	10,000,000	100,000	100	395,000	Oct..	1898	.25
102	Silver Queen, c.	Ariz.	5,000,000	200,000	25	*	.....	.....	.....
103	Silver State, g.	Colo.	700,000	700,000	1	*	.....	.....	.....
104	Silver State, s. g. l.	Utah.	100,000	100,000	1	1,000	Sept..	1897	.00½
105	Siskiyou Con., s.	Cal..	2,000,000	200,000	10	46,000	Apr..	1898	.01
106	South Fork Con.	Utah.	50,000	50,000	1	5,000	Mar..	1898	.01
107	Star, g. s.	Utah.	1,000,000	200,000	5	1,000	Mar..	1898	.00½
108	Sunbeam Cons.

CHEMICALS, MINERALS, RARE ELEMENTS, ETC.—CURRENT PRICES.

NOTE.—These quotations are for wholesale lots in New York unless otherwise specified, and are generally subject to the usual trade discounts. This table is revised up to Dec. 1st. Readers of the ENGINEERING AND MINING JOURNAL are requested to report any corrections needed, or to suggest additions which they may consider advisable. See also Market Review of Chemicals and Minerals.

	Cust. Meas.	Price.
Abrasives—		
Carborundum, f.o.b. Niagara Falls, grains	lb.	$0.15
Powdered	"	.10
Corundum, N. C.	"	.07@.10
Chester	"	.04½@.05
Emery, Turkish flour	"	.03
Grains	"	.05
Naxos flour	"	.03
Grains	"	.05
Chester flour	"	.03
Grains	"	.05
Peekskill flour	"	.01¾
Grains	"	.02½
Crude, Kuluk, best	lg. ton	18.50
Levant, "	"	22.00
Naxos (Greek) best	"	32.00
Pumice Stone, powdered	lb.	.01½@1.85
Lump, per quality	"	.04@.40
Rotenstone, ground	"	.02
Lump, according to quality	"	.06@.18
Rouge	"	.17@.30
Tripoli, prepared	sh. ton.	12.00
Acids—Acetic, 30% pure	lb.	.02¾
30% ch. pure	"	.06½
80% pure	"	.09
Glacial, pure	"	.10¾
Chem. pure	"	.21
Benzoic, English	"	1.10
German	"	.48
Boracic, pure cryst	"	.09@.10¼
Powdered	"	.09½@.10¾
Carbolic, cryst. in drums	"	.16
Carbonic, liquid	"	.12½
Chromic, crude	"	.25
Chem pure	"	.40
Absol. ch. pure	"	1.75
Hydrochloric, ch. pure	"	.08
Hydrofluoric, 30%	"	.03@.04½
48%	"	.05@.06
Best	"	.25
Nitric, chem. pure	"	.10
Sulphuric, 98%	"	.02
Chem. pure	"	.07
Sulphurous	"	.05
Tartaric, cryst	"	.31½@.32
Powder	"	.32@.32½
Alcohol—94%	gal.	2.40@2.44
Refined wood, 95@97%	"	.75@.80
Purified	"	1.20@1.50
Alum—Lump	100 lbs.	1.65
Powdered	"	2.50
Ground	"	1.75
Chrome, com'l	"	3.50
Aluminum—Nitrate	lb.	1.50
Oxide, com'l	"	.20
Pure	"	.80
Chem. pure	"	1.00
Hydrated	"	.05
Sulphate, pure	"	.02
Ammonia—Aqua, 16°	"	.02½@.03
18°	"	.03@.03½
20°	"	.03½@.04
26°	"	.05½@.06
Ammonium—		
Acetate, cryst	"	.65
Bromide, pure	"	.52@.53
Carbonate	"	.07¼@.07½
Muriate, gran., white	"	.05¼
Lump	"	.08¼
Gray	"	.05
Nitrate, white, pure (99%)	"	.09
Antimony—Glass	"	.30@.40
Needle, lump	"	.05@.06
Powdered	"	.07@.08½
Oxide, com'l white, 95%	"	.20
Com'l white, 99%	"	.35
Sulphuret	"	.16
Arsenic—White	"	.04@.04½
Red	"	.07¾@.08
Asphaltum—California Ventura	sh. ton	32.00
Cuban, best	"	40.00
Common	"	18.00
Trinidad, refined	"	30.00
Gilsonite, Utah, ordinary	sh. ton	40.00
Select	"	60.00
Barium—Carbonate, lump, 80%	"	25.00
90%	"	27.50
92@94%	"	27.25
96@98%	"	29.00
Powdered, 80%	lb.	.01¾
90%	"	.02
Chloride, com'l	"	.02½
Chem. pure cryst	"	.05
Chlorate	"	.28
Nitrate, com'l, pow'd.	"	.07
Pure, pow'd	"	.07@.08
Oxide, com'l, hyd. cryst	"	.18@.22
Hydrated, pure cryst.	"	.25
Pure, powd	"	.27
Sulphide	"	.40
Sulphate	"	.02¼@.02¾
Barytes—Crude, No. 1	sh. ton	9.00@10.00
No. 2	"	8.00@8.25
No. 3	"	7.75@8.00
Prime White	"	12.00@15.00
American, floated	"	12.50@18.00
Foreign, floated	"	19.50@21.00
Bauxite—Georgia, f.o.b. cars, first grade	lg. ton	3.25@4.50
Second grade	"	3.00
Alabama, f. o. b. cars Rock Run	"	3.85
Benzole—90%	gal.	1.00@1.10
Bismuth—Oxide, hydr.	lb	2.25@2.56
Nitrate cryst	oz.	.09
Bitumen	lb.	.03½@.05
Bone Ash		02¾@.03½
Borax—		
Cryst. and pow'd	"	.07
Calcined	"	.20
Bromine—		
Bulk	"	.45

	Cust. Meas.	Price.
Cadmium—Metallic	lb.	1.90@2.00
Sulphide	"	3.25@4.00
Sulphate	oz.	.14
Calcium—		
Carbide, in ton lots, f. o. b. Niagara Falls, N.Y.	lb.	.03@.04
Acetate, pure white	"	.10
Carbonate, ppt	"	.05
Chem. pure	"	.75
Chloride	100 lbs.	.90
Sulphite	lb.	.05
Sulphide	"	.20
Cement—		
Portland, Am., 400 lbs.	bbl.	1.80@2.00
Foreign	"	1.75@2.50
"Rosendale," 300 lbs.	"	.65
Sand cement, 400 lbs.	"	1.85@1.95
Slag cement, imported	"	1.65
Ceresine—		
Orange and Yellow	"	.10@.10½
White	"	.11½@.13½
Chalk—Com'l, lump	sh. ton	2.00@2.10
Ppt	lb.	.04@.04½
French	100 lbs.	.30@.35
Chrome Ore (50% chrome) ex ship	lg. ton	24.50
Clay, China—Am. com.	sh. ton	7.50
Am. best	"	8.50
English, common	"	11.00@12.50
Best grade	"	15.00
Fire, ground, f.o.b. Jersey City, N. J.	"	4.00@5.00
Slip Clay, f.o.b. Albany	"	3.00
Cobalt—Carbonate	lb.	1.50
Nitrate	"	1.30
Oxide	"	1.76@1.85
Sulphate	"	.85
Copperas	100 lbs.	.57½
Copper—Acetate, com'l	lb.	.16@.20
Carbonate	"	.15@.16
Chloride	"	.25
Nitrate, crystals	"	.35
Oxide, black	"	.30
Ppt., pure	"	.50
Red	"	.40
Ppt., pure	"	1.25
Cream of Tarter—crys.	"	.23¼@.23½
Granulated	"	.23¼@.23½
Powdered	"	.23¼@.24
Cryolite	"	.08½
Explosives—		
Blasting powder, A	"	.08½
Blasting powder, B	"	.05@.05½
"Rackarock," A	"	.25
"Rackarock," B	"	.18
Judson R.R. powder, by carload	"	.10
Dynamite, (40% nitro-glycerine)	"	.15
(50% nitro-glycerine)	"	.17
(60% nitro-glycerine)	"	.19
(75% nitro-glycerine)	"	.23
Glycerine, for nitro (32 2-10° Be.)	"	.10½@.12
Nitro-Benzole	"	.14@.15
Feldspar—Ground	sh. ton	7.00@7.75
Flint—(See Silica).		
Fluorspar—Am. lump	"	7.00
Gravel	"	6.50
Crushed	"	6.00
Ground	"	11.00
Extra fine ground	"	12.50
Foreign, lump	"	8.00@12.00
Ground	"	11.50@14.00
Fuller's Earth—Lump	100 lbs.	.75
Powdered, in bags	"	.82½
Graphite—(See Plumbago).		
Gypsum—		
Am. gr'd (terra alba)	sh. ton	7.00
Fertilizer	"	4.50
Rock	lg. ton	4.00
English and French	"	14.00@16.00
Infusorial Earth—Ground, best qualities	"	20.00@.40.00
Iodine—Crude	100 lbs.	2.55
Resublimed	"	2.90@2.95
Iron—Chromate	lb.	.03@.10
Muriate	"	.05
Nitrate, com'l	"	.01@.01½
Pure	"	.03½@.04½
Oxide	"	.02@.12
Scale	"	.01@.03
Kaolin—(See Clay, China).		
Kanit	lg.ton	8.80@9.05
Kryolith—(See Cryolite.)		
Lead—Acetate		
White, broken	lb.	.06½
Com'l, broken	"	.05¾
White, gran	"	.07¾
Nitrate, com'l	"	.06½@.06¾
Chem. pure	"	.35
Lime—Bldg., ab. 250 lbs	bbl.	.65@.75
Finishing	lb.	.75@.80
Magnesite—		
Crude, lump 94%	sh. ton	8.00
Calcined, foreign	"	25.00
Domestic	"	16.00
Magnesium—		
Metallic, ingots (Ger.)	kg.	5.95@6.90
Powdered (Ger.)	"	6.19
Ribbon or wire (Ger.)	"	10.00
Carbonate	lb.	.10
Chloride, com'l	"	.01¾
Fused	"	.20
Nitrate	"	.60
Manganese—		
Crude, powdered, 70@75% binoxide	"	.01¼@.01½
75@85% binoxide	"	.01½@.02½
85@90% binoxide	"	.02½@.03¼
90@95% binoxide	"	.03¼@.05½
Carbonate	"	.16@.20
Chloride	"	.04
Ore, 50%	unit	.21@.22½
Sulphate, powdered	lb.	.25
Pure cryst	"	.40

	Cust. Meas.	Price.
Marble—Flour	sh. ton	8.00
Mercury—Bichloride	lb.	.59@.60
Bisulphate	"	.41
Mica—		
Ground	lb.	.04@.06
Sheets, according to size and quality.		
Mineral Wool—F. o. b. Stanhope, N. J.:		
Slag, ordinary	100 lbs.	1.00
Selected	"	1.67
Extra	"	4.00
Rock, ordinary	sh. ton	37.00
Selected	100 lbs.	4.00
Extra	"	7.00
Monazite—92%	sh. ton	140.00
Nickel—		
Oxide, black No. 1	lb.	1.00
Black No. 2	"	.60
Green, No. 1	"	1.00
No. 2	"	.60
Oils—Black, reduced 29 gr., 25@30%	gal.	.07@.07½
Black reduced 29 gr. 15 cold test	"	.08@.08½
Black reduced 29 gr. zero	"	.11@.12
Black reduced summer	"	.06½@.07
Smith's Ferry, 33@34 gr.	"	.07½@.08½
West Virginia, 29 gr.	"	.22@.24
Cylinder, dark steam ref	"	.08@.13
Dark filtered	"	.11@.16
Light filtered	"	.13@.15½
Extra cold test	"	.21@.25
Gasoline, 86°	bbl.	13.00@14.00
88°	"	15.00@16.00
90°	"	18.00@19.00
Neutral filtered, lemon, 33@34 gr.	gal.	.13@.18½
White, 33@34 gr.	"	.21@.23
Wool grade, 32 gr.	"	.11@.14
Naphtha, crude, 68@72°	bbl.	5.50
70°	"	6.00
Paraffine, high viscosity	gal.	.20@.25
23½@24 gr.	"	.09¼@.09¾
25 gr.	"	.08¼@.08½
28@32 gr.	"	.06¾@.07¼
Red No. 1	"	.08¾@.09¼
No. 2	"	.08½@.08¾
Linseed, domestic raw	"	.37@.38
Boiled	"	.39@.40
Calcutta, raw	"	.54
Graphite, lubricating, Am. dry	lb.	.10
In oil	"	.12
Axle grease	"	.08½@.10
Wood grease	"	.05@.06
Ozokerite—Foreign	"	.06@.08
Paints and Colors—		
Benzine, Samatra	"	.35@.40
Marbled	"	.27@.28
Chrome green, common	"	.05@.06
Extra	"	.14½@.15
Yellow, common	"	.10
Best	"	.25
Silica Graphite, thick	"	.12
Thinned	gal.	1.15
Lampblack—Com'l	lb.	.03@.05
Refined	"	.08@.10
Calcined	"	.12@.20
Fine spirit	"	.20@.35
Litharge, Am. powd.	"	.04½@.05¼
English flake	"	.07¾@.08
Metallic, brown	"	.05½
Red	"	18.00@20.00
Ocher, Am. best	sh. ton	15.00
Dutch, washed	lb.	.04¾@.05
French, washed	"	.01@.01¾
Orange mineral, Am.	"	.07½@.08
Foreign, as to make	"	.08½@.10¾
Paris green, pure	"	.14½@.21½
Red lead, American	"	.05¾@.06
Foreign	"	.07½@.08
Shellac, D. C.	"	.28@.30
Native	"	.16@.17
Turpentine, spirits	gal.	.30@.30½
Ultramarine, best	lb.	.25
Vermilion, Amer. lead	"	.14@.16
Quicksilver, bulk	"	.52
Chinese	"	.80@.90
English, imported	"	.70@.90
Artificial	"	.12@.20
White lead, Am., dry	"	.04½@.04¾
In oil	"	.05½@.06
English, in oil	"	.07½@.08¼
Whiting, common	100 lbs.	.35@.40
Gilders	"	.45@.50
Zinc white, Am., ex. dry	lb.	.03¾@.04½
Foreign, red seal, dry	"	.07½@.08⅝
Green seal, dry	"	.08⅝@.09⅞
Pitch—Coal tar	gal.	.08
Plumbago—American, pulverized, f. o. b., Providence, R. I.	sh. ton	25.00@40.00
Lump	"	8.00
German, lump	100 lbs.	.95
Pulverized	lg. ton	16.50
Ceylon, crude	lb.	.01¼@.01½
Pulverized	"	.02@.05
Potash—Caustic	"	.04½@.06
Potassium—Metallic, in balls (Ger.)	kg.	17.85
Bicarbonate cryst	lb.	.08½
Powdered or gran	"	.12
Bichromate	"	.09¾@.10
Bromide, bulk	"	.44@.45
Carbonate	"	.03@.04
Chromate	"	.35
Cyanide (98@99%)	"	.28
Double manure salts, 48@53% (basis 48%)	100 lbs.	1.03
Muriate, 80@85% (basis 80%)	"	1.78
Permanganate, pure cr.	lb.	.15¼@.15½
Chem. pure	"	.34

	Cust. Meas.	Price.
Potassium—Silicate	lb.	.06
Prussiate, yellow	"	.16@.17
Red	"	.37@.40
Sulphate, 90@95% (basis 90%)	100 lbs	1.99½
Sulphide, com'l	"	.10
Quartz—(See Silica).		
Rosin—Common	gal.	.10
Best	"	.16
Saltpeter—Crude	lb.	.03¾@.04
Double refined	"	.05@.06
Silica—		
Ground quartz	sh. ton	6.75@8.00
Best	"	12.00
Lump quartz	"	2.50@4.00
Silver—Chloride	oz.	.65
Nitrate	"	.41@.42½
Oxide	"	.85@1.10
Slate—Flour	sh. ton	7.50
Sodium—Metallic	lb.	.75
Acetate, com'l	"	.03½
Chem. pure	"	.05½
Bichromate	"	.07¾@.08
Bisulphite, com'l	"	.01¼@.02¼
Bromide	"	.49@.50
Chlorate, com'l	"	.09¾@.10
Hyposulphite, com'l	100 lbs.	1.60
Nitrite	lb.	.07½@.07¾
Peroxide	"	.45
Silicate, Com'l	"	.01¼@.01½
Sulphate, gran., purl'd	"	.03
Tungstate, com'l	"	.35
Pure	"	.50
Strontium—Carb., ppt.	"	.13@.14
Nitrate	"	.07½@.07¾
Sulphur—Roll	100 lbs.	2.10
Flour	"	2.20@2.25
Talc—N. C. No. 1	sh. ton	15.00@15.50
No. 2	"	10.00@12.00
N. Y., Fibrous	"	8.00@9.00
French, best	"	20.00
Italian, best	"	20.00
Tin—Chloride	lb.	.11@.13
Crystals	"	.14@.14¼
Muriate	"	.06@.08
Oxide, white, ch. pure	"	.30@.32
Uranium—Oxide	"	2.00@3.00
Zinc—Metallic, ch. pure	"	.06¾
Carbonate	"	.15
Chloride	"	.06
Dust	"	.06¾@.08
Sulphate	"	.02@.02¼

THE RARE ELEMENTS.

Prices given are at makers' works in Germany, unless otherwise noted.

	Cust. Meas.	Price.
Barium—Amalgam	grm.	$1.19
Electrol	"	5 71
Beryllium—Powder	"	5.95
Crystals	"	9.04
Nitrate (N. Y.)	oz.	2.50
Boron—Amorphous, pure	grm.	.19
Crystals, pure	"	1.43
Nitrate (N. Y.)	lb.	1.50
Calcium—Electrol	"	4.28
Cerium—Fused	grm.	2.02
Nitrate (N. Y.)	lb.	28.00
Chromium—Fused	kg.	5.95
Pure powder	"	1.79
Chem. pure cryst	grm.	.19
Cobalt—(98@99%)	kg.	5.35@5.71
Pure	"	30.94
Didymium—Powder	grm.	3.81
Nitrate (N. Y.)	oz.	4.00
Erbium	grm.	3.09
Nitrate (N. Y.)	oz.	3.00
Gallium	grain	9.52
Germanium—Powder	grm.	33.32
Fused	"	35.70
Glucinum—Powder	"	5.95
Crystals	"	9.04
Nitrate (N. Y.)	lb.	2.50
Indium	grm.	4.05
Iridium	"	1.19
Lanthanum—Powder	"	4.28
Electrol, in balls	"	9.04
Nitrate (N. Y.)	oz.	3.50
Lithium	grm.	2.38
Nitrate (N. Y.)	oz.	.60
Molybdenum—Powder	kg.	2.62
Fused, electrol	100 grms.	15.47
Niobium	grm.	3.81
Osmium	"	.95
Palladium	"	.95
Rhodium	"	2.87
Rubidium—Pure	"	4.76
Ruthenium—Pure	"	1.55
Selenium—Com'l powder	kg	26.18
Sublimed powder	"	35.70
Sticks	"	28.56
Silicium—Amorphous	100 grms.	2.87
Crystals, pure	"	7.14
Strontium—Electrol	grm.	6.19
Tantalium—Pure	"	3.57
Tellurium—Ch. p. sticks	100 grms.	11.90
Powder	"	9.52
Thallium	kg.	23.80
Thorium—Metallic	grm.	7.85
Nitrate 49@50% (N. Y.)	lb.	7.50@8.00
Titanium	grm.	.71
Uranium	"	.48
Nitrate (N. Y.)	oz.	.25
Vanadium—Fused	grm.	1.19
Wolfram—Fused	100 grms.	22.80
Powder, 95@98%	kg.	2.38
Chem. pure	"	7.14
Ore, lump	"	47.60
Powdered	"	42.84
Yttrium	grm.	3.33
Nitrate (N. Y.)	oz.	4.00
Zirconium—Com'l	kg.	119.00
Pure	grm.	.71
Nitrate (N. Y.)	oz.	1.00

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THE BESSEMER department is an iron building 64 by 280 and 30 feet to the eaves, with Stock Elevators; three Cupola Smelting Furnaces of two hundred (200) gross tons per turn of 12 hours; two five-ton Bessemer Convertors; Charging and Casting Cranes; Casting Pit; three improved vertical Soaking Pit Furnaces; Cranes for stripping and handling Ingots; Bloom Mill; Bloom Shear; Tracks and all necessary engines and hydraulic apparatus. Capacity one hundred and fifty (150) tons per turn of 12 hours.

THE STEEL STRUCTURAL ROLLING MILL in front of the Bessemer Plant is an iron building 110 by 320 feet, with extensions to either side for engines 30 by 50 feet, and consists of a 26-inch Mill and an 18-inch Mill cooling-beds, and all necessary engines, heating furnaces, hot saws with driven roller-tables, hydraulic automatic lifting tables, and other labor-saving machinery. Capacity of 26-inch Mill fifty (50) tons; capacity of 18-inch Mill twenty-five (25) tons per turn of 12 hours.

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THE STEAM SUPPLY from a battery of 20 tubular boilers, set up in the most improved manner, the Bessemer Repair Shops and the hydraulic pumps, feed pumps, blowers and their engines, are inclosed in a separate iron building 40 by 318 feet.

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THE STEEL PLANT AND MILL contains twenty-eight (28) Steam Engines and twenty-two (22) hydraulic cylinders and machines for handling the material.

THE MILL was built to manufacture Steel Beams, Channels, Angles, Tees and special shapes for architectural and engineering purposes.

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Three Hydraulic Presses. Pressure, 500 lbs. per square inch; platens, 29½ x 34 in.; ram, 14 in. dia., 3 ft. 6 in. rise; distance from platen when lowered to head of press, 5 ft. All in excellent condition, with pumps, etc., complete.

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A. H. Fowler, Sec'y & Treas.

DIVIDENDS.

HOMESTAKE MINING COMPANY,
MILLS BUILDING, 15 BROAD STREET.
NEW YORK, Dec. 15, 1898.

DIVIDEND NO. 255.

The regular monthly dividend, TWENTY-FIVE (25) CENTS PER SHARE, has been declared for November, payable at the office of the Company, San Francisco, or at the transfer agency in New York, on the 24th inst. Also EXTRA DIVIDEND (No. 256) of Twenty-five (25) Cents Per Share, payable at the same time and place.

Transfer books close on the 20th inst.

LOUNSBERY & CO., Transfer Agents.

TOMBOY GOLD MINES COMPANY,
18 WALL STREET,
NEW YORK, Dec. 16, 1898.

DIVIDEND NO. 24.

The Board of Directors of the Tomboy Gold Mines Company has this day declared a dividend ($50,000) of Twenty-five Cents per share of the capital stock, payable December 21st, to stockholders of record this date. The transfer books are closed to-day and will reopen on December 22d, 1898.

W. D. PAGAN, Secretary.

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